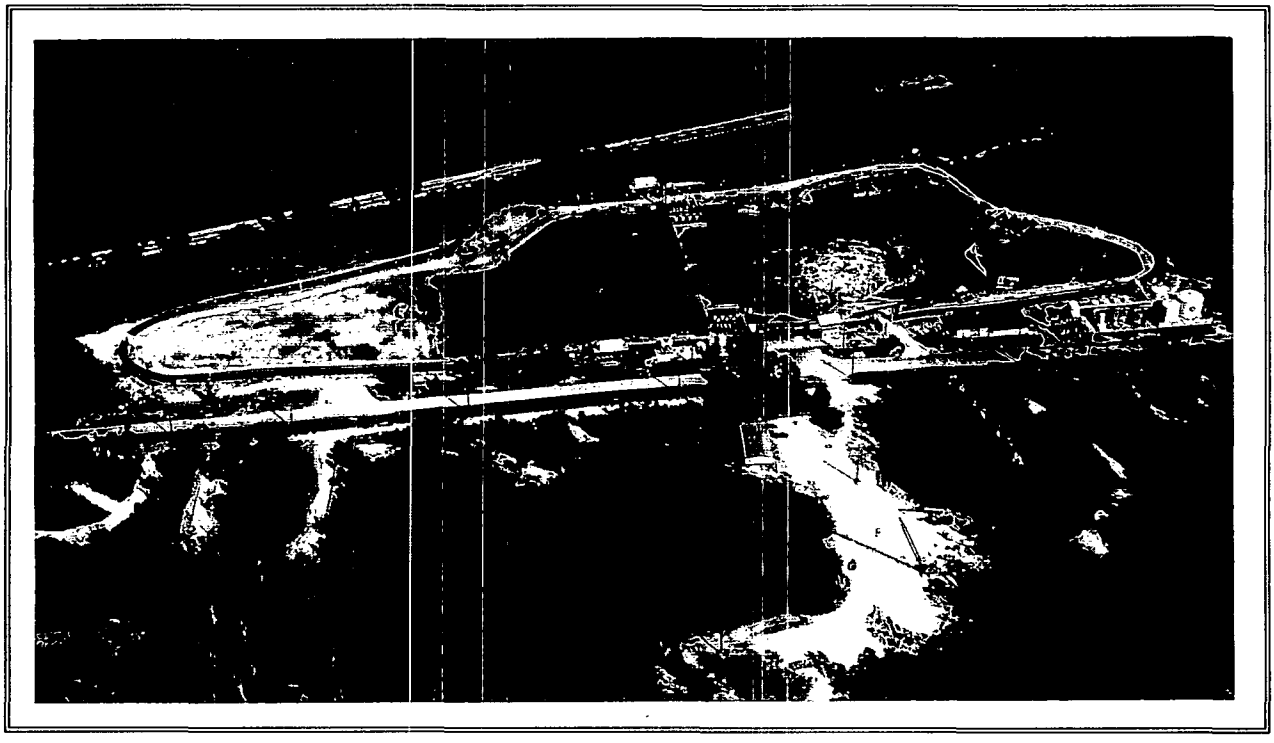
French Ltd. Project

FLTG, Inc.
Crosby, Texas

MONTHLY PROGRESS REPORT



Submitted to:

U.S. Environmental Protection Agency - Region 6
and
Texas Natural Resource Conservation Commission

August, 1995

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CONTENTS

CONTENTS (Continued)

CONTENTS (Continued)

CONTENTS (Continued)

LIST OF ILLUSTRATIONS

LIST OF FIGURES

LIST OF TABLES

CONTENTS (Continued)

CONTENTS (Continued)

LIST OF ATTACHMENTS

LIST OF APPENDICES

Samples Dated August, 1995

Project I.D.	Date Received	Project I.D.	Date Received
M03A0344	8/07/95	M04B0055	8/24/95
M04B0050	8/07/95	M04B0056	8/24/95
M03A0345	8/15/95	S14E0007	8/24/95
S14E0005	8/17/95	M03A0347	8/25/95
S16E0006	8/17/95	S16E0007	8/25/95
M04B0051	8/17/95	M03A0348	8/28/95
M03A0346	8/21/95	M06C0030	8/29/95
M04B0052	8/22/95	M01D0059	8/29/95
S14E0006	8/22/95	S16E0008	8/30/95
M04B0053	8/22/95	M03A0349	8/31/95
M04B0054	8/22/95		

1.0 INTRODUCTION

This report covers the activities of FLTG, Inc. and the French Limited Project for August, 1995. FLTG, Inc. manages the project for the French Limited Task Group of Potentially Responsible Parties.

During August, 1995, the project team focused on the following activities and issues:

- Health, Safety, and Quality.
- Safety awareness.
- Contractor safety.
- Safety on multiple job assignments.
- HAZOP of daily work assignments.
- Detecting and correcting work place hazards.
- Vegetation evaluation in Cell E.
- Operation and maintenance of the aquifer in-situ bioremediation system.
- Water treatment plant operation and maintenance.
- Operation of the data base management system.
- Wetlands project re-vegetation.
- This report includes:
    - A summary of August activities, issues, and progress.
    - Lagoon area activities.

- Groundwater and Subsoil Remediation activities, issues, and progress.
- Groundwater Treatment Plant activities and issues.
- Ambient Air Management.
- QA/QC status and data.
- Site management activities and issues.
- Wetlands restoration activities, issues, and progress.

2.0 SUMMARY

2.1 Summary of Activities and Progress

2.1.1 Health and Safety

Emphasized the safety issues associated with multiple job assignments and limited support personnel; emphasized the need to be flexible and responsive to personal limitations and to changing job conditions.

No personal injury or equipment damage incidents.

All site workers earned the August safety bonus.

Conducted safety meetings and job inspections at the start of each shift; reviewed safety issues before starting all jobs.

All employees and contractors attended daily safety meetings.

Conducted daily mini-HAZOP of all specific jobs.

Supervision made 144 specific on-the-job safety contacts.

Emphasized the causes, symptoms, and treatment of heat stress.

Inspected and certified all fire extinguishers.

Emphasized the hazards and precautions associated with working around moving equipment.

Conducted 22 specific health and safety inspections.

Logged all safety issues each shift; less than 24-hour response to all safety issues.

The daily raffle ticket safety awareness program has been effective in maintaining daily safety awareness among all site personnel and contractors.

Conducted personnel exposure monitoring, and all results were within acceptable levels. The most recent results are in Table 2-1.

2.1.2 Quality/QAQC/Data Base Management

The total quality process was used. The status of the goals is shown on Table 2-2.

All quality goals were met.

Raw data is being validated as per the plan.

The data base management system operated with no problems or delays.

There were no data or reports rejected due to errors.

American Analytical continued to provide quality data on time.

2.1.3 Lagoon

Maintained a high level of biological activity in Cell D; OUR and HMB were high. Added O_2 to Cell D using a downdraft aerator for seven days.

Continued periodic subsurface injection of Cell D water in Cell E; there were no problems or issues, and adequate gradient control was maintained.

Continued evaluation of various tree and bush species for passive dewatering of the subsurface inside the floodwall.

Evaluating long-term surface water source options for the lagoon area; applied East Sough surface water to Cell E and F vegetation during dry periods.

Tested floodwall gate closure.

2.1.4 Ambient Air Management

Ambient air quality was manually checked daily with portable TVOC analyzers, and no response action was required.

Air quality was continuously monitored in all potential exposure areas and on all special jobs.

Time-integrated samples were collected in three work areas, and the results indicated no exposure; the data is shown in Table 2-1.

2.1.5 Aquifer Remediation

Monitored status of DNAPL plumes.

Continued routine S1 oxygen injection in target areas.

Continued INT oxygen and nutrient injection in target areas.

Continued to evaluate and implement ways to increase INT zone circulation rates in the INT-11 wall area and the SW area and to increase S1 zone circulation rates in the S1-63 area and the S1-120 area.

Started installation of two new INT injection wells in the southwest area.

Converted a number of S1 and INT wells to alternative functions.

Operated vacuum-enhanced pumping systems for specific INT wells.

Issued weekly well status and performance reports.

Inspected and adjusted all wells each day.

Continued daily maintenance of recovery and injection wells.

Completed monthly well measurements and sampling; TOC levels continue to decrease; DO and nitrate levels continue to increase.

Maintained O_2 content of injection water at about 40-45 ppm.

Shut off 4 more production or injection wells in areas that have reached aquifer remediation shut-off criteria; monthly sampling indicated no rebound and indicated

favorable gradient control; monthly sampling indicated several well conversions and the installation of two new injection wells.

2.1.6 Groundwater Treatment

Some of the treated water required carbon treatment to maintain effluent criteria due to short-term increase in chlorinated organic content.

There was no downtime.

The water treatment plant effluent data is shown in Table 2-3. All effluent samples met criteria.

TOC input to T-101 continued to decrease.

The process operators collected all the process water and ground water samples.

Completed the test in R-2 to measure the non-toxic, non-biodegradable component of the groundwater; the non-toxic, non-biodegradable TOC varies across the site and ranges from about 20 ppm to 200 ppm.

2.1.7 Wetlands Restoration

Completed the 30-day water level cycling to saturate the marsh areas with saltwater.

Completed full-scale re-vegetation of the tidal zone and demobilized the contractor.

Reviewed status, progress, and issues with the TNRCC and other agencies.

2.1.8 Site Management and Issues

Used the on-site laboratory to process all the operational control samples.

Reviewed site progress and issues in detail with EPA and TNRCC on a regular basis.

Validated all analytical data as per the QAQC plan.

Reviewed project status and issues each day to ensure focus on critical issues - safety, quality, cost, INT zone progress, and wetlands construction.

Issued weekly cost, schedule, and maintenance reports.

Reviewed progress on issues and action plans each week.

Reduced aquifer remediation operational and maintenance requirements.

Reduced technical support MH's.

Reduced administrative MH's.

Continued agency oversight cost discussions with EPA; submitted long-term oversight plan.

Reduced overall cost for the project control function.

Developed the table of contents for the site closure plan.

TABLE 2-1

Ambient Air Management
Time Integrated Exposure Data

Data unavailable this month - see QA/QC Section 7.2.2.1 for explanation

TABLE 2-2

Project Quality

Status as of 08/31/95		Goals
Yes	1)	No OSHA recordable injuries.
Attention	2)	100% compliance with all safety rules and procedures.
Yes	3)	No citations for violations of applicable, relevant and appropriate regulations.
Yes	4)	100% attendance (including contractors) at daily safety meetings.
Attention	5)	Less than 24-hour response time on health and safety issues.
Yes	6)	100% sign-in and security clearance.
Yes	7)	No invalidation of reported data due to QA/QC issues.
	8)	Spend less than:

		MH/Month
Yes	• Direct hire	1,200
Yes	• FLTG management	600
Yes/Attention	• Technical support (2 people)	200
Yes/Attention	• Maintenance support	80

Yes	9)	Pump at least 90 gpm; inject at least 60 gpm.
Yes	10)	Remediate shallow alluvial zone aquifer in 60 months.
Yes	11)	Hold analytical cost to less than $15,000 per month (1994 only).
Yes	12)	No unscheduled overtime (per day or per week).
Yes	13)	No agency contacts which require 3rd party resolution.
Yes	14)	Documented training of site personnel for all work assignments.
Yes	15)	Monthly audit of actual performance versus goals.

TABLE 2-3

Treated Water Results Summary

Collected	Set No.	pH (6-9)		TSS 5 PPM		TOC 55 PPM		O&G 15 PPM		Benzene 150 PPB		Chlor HC's 500 PPB		Total PCBs 0.65 PPB		Napthalene 300 PPB	
		Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg
2-Mar-95	M03A0313	7.47		.5		8.5		2.5		2.5		145.		.16		5.	
6-Mar-95	M03A0314	7.49		1.		8.1		2.5		2.5		128.		.16		5.	
9-Mar-95	M03A0315	7.38		1.		8.		2.5		2.5		193.		.16		5.	
13-Mar-95	M03A0316	7.64		5.		7.2		2.5		2.5		111.		.16		5.	
16-Mar-95	M03A0317	7.55		.5		6.		2.5		2.5		150.		.16		5.	
20-Mar-95	M03A0318	7.41		.5		6.6		2.5		2.5		97.		.16		5.	
23-Mar-95	M03A0319	7.45		1.		6.		2.5		2.5		185.		.16		5.	
27-Mar-95	M03A0320	7.83		3.		12.2		2.5		6.		325.		.16		5.	
30-Mar-95	M03A0321	7.47	7.5	7.	2.2	11.9	8.3	2.5	2.5	6.	3.3	342.	186	.16	.16	5.	5.
3-Apr-95	M03A0322	7.42	7.5	1.	2.2	11.7	8.6	2.5	2.5	6.	3.7	269.	200	.16	.16	5.	5.
6-Apr-95	M03A0323	7.45	7.5	2.	2.3	12.2	9.1	2.5	2.5	6.	4.1	239.	212	.16	.16	5.	5.
10-Apr-95	M03A0324	7.38	7.5	2.	2.4	11.1	9.4	2.5	2.5	6.	4.4	230.	216	.16	.16	5.	5.
13-Apr-95	M03A0325	7.62	7.5	3.	2.2	12.9	10.1	2.5	2.5	6.	4.8	364.	245	.16	.16	5.	5.
17-Apr-95	M03A0326	7.59	7.5	11.	3.4	12.9	10.8	2.5	2.5	6.	5.2	247.	255	.16	.16	5.	5.
20-Apr-95	M03A0327	7.75	7.6	1.	3.4	12.1	11.4	2.5	2.5	6.	5.6	226.	270	.16	.16	5.	5.
24-Apr-95	M03A0328	7.67	7.6	13.	4.8	13.	12.2	2.5	2.5	6.	6.	269.	279.	.16	.16	5.	5.
27-Apr-95	M03A0329	7.51	7.5	1.	4.6	12.2	12.2	2.5	2.5	2.5	5.6	236.	269	.16	.16	5.	5.
1-May-95	M03A0330	7.63	7.6	1.	3.9	12.1	12.2	2.5	2.5	2.5	5.2	177.	251	.16	.16	5.	5.
4-May-95	M03A0331	7.91	7.6	4.	4.2	12.5	12.3	2.5	2.5	2.5	4.8	222.	246	.16	.16	5.	5.
8-May-95	M03A0332	7.95	7.7	4.	4.4	11.3	12.2	2.5	2.5	2.5	4.4	228.	244	.16	.16	5.	5.
11-May-95	M03A0334	7.97	7.7	4.	4.7	10.9	12.21	2.5	2.5	2.5	4.1	235.	245	.16	.16	5.	5.
15-May-95	M03A0333	7.87	7.8	8.	5.2	13.7	12.3	2.5	2.5	2.5	3.7	209.	228	.16	.16	5.	5.
18-May-95	M03A0335	7.73	7.8	6.	4.7	11.	12.1	2.5	2.5	6.	3.7	374.	242	.16	.16	5.	5.
22-May-95	M03A0336	7.88	7.8	1.	4.7	31.	14.2	2.5	2.5	6.	3.7	274.	247	.16	.16	5.	5.
29-May-95	M03A0337	7.76	7.8	1.	3.3	45.	17.7	2.5	2.5	6.	3.7	227.	242	.16	.16	5.	5.
5-Jun-95	M03A0338	7.53	7.8	.5	3.3	12.1	17.7	2.5	2.5	2.5	3.7	189.	237	.16	.16	5.	5.
12-Jun-95	M03A0339	7.78	7.8	1.	3.3	45.8	21.5	2.5	2.5	2.5	3.7	188.	238	.16	.16	5.	5.
19-Jun-95	M03A0440	7.68	7.8	5.	3.4	7.	20.9	2.5	2.5	2.5	3.7	144.	230	.16	.16	5.	5.
26-Jun-95	M03A0441	7.71	7.8	1.	3.1	9.1	20.6	2.5	2.5	2.5	3.7	128.	219	.16	.16	5.	5.
2-Jul-95	M03A0442	7.47	7.7	.5	2.7	6.7	20.2	2.5	2.5	2.5	3.7	180.	213	.16	.16	5.	5.
10-Jul-95	M03A0343	7.76	7.7	5.	2.3	5.2	19.2	2.5	2.5	2.5	3.7	182.	210	.16	.16	5.	5.
17-Jul-95	M03A0344	7.75	7.7	3.	2.	7.6	18.8	2.5	2.5	2.5	3.3	181.	188	.16	.16	5.	5.
24-Jul-95	M03A0345	7.55	7.7	.5	1.9	8.2	16.3	2.5	2.5	5.	3.2	479.	211	.16	.16	5.	5.
31-Jul-95	M03A0346	7.64	7.7	.5	1.9	2.5	11.6	7.8	3.1	5.	3.1	380.	228	.16	.16	5.	5.
7-Aug-95	M03A0347	7.55	7.7	2.	2.1	6.4	10.9	2.5	3.1	5.	3.3	536.	266	.16	.16	5.	5.
14-Aug-95	M03A0348	7.6	7.6	2.	2.2	7.3	6.7	2.5	3.1	5.	3.6	289.	278	.16	.16	5.	5.
21-Aug-95	M03A0349	7.55	7.6	1.	1.7	7.6	6.7	2.5	3.1	5.	3.9	261.	291	.16	.16	5.	5.
28-Aug-95	M03A0350	7.67	7.6	1.	1.7	8.7	6.7	2.5	3.1	5.	4.2	223.	301	.16	.2	5.	5.

Chlorinated hydrocarbons value is the sum of detected concentrations of 21 volatile chlorinated hydrocarbons on target compound list.

TABLE 2-3 (Continued)
Treated Water Results Summary

Collected	Set No.	As 150 PPB		Ba 1000 PPB		Cd 50 PPB		Cr 500 PPB		Cu 15 PPB		Pb 66 PPB		Mn 300 PPB		Hg 1 PPB		Ni 148 PPB		Se 20 PPB		Ag 5 PPB		Zn 162 PPB	
		Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg
2-Mar-95	M03A0313	23.		133.		.1		2.		1.		.5		15.		.1		8.		1.3		.5		6.	
6-Mar-95	M03A0314	17.		130.		1.		1.		3.		2.2		3.		.1		2.5		.5		.8		8.	
9-Mar-95	M03A0315	24.		111.		.1		.2		.8		.5		4.		.1		4.		1.3		.2		6.	
13-Mar-95	M03A0316	17.		121.		.1		.2		1.		.5		41.		.1		3.		1.3		.2		5.	
16-Mar-95	M03A0317	23.		114.		.1		.3		3.		.5		2.		.1		3.		1.3		.2		11.	
20-Mar-95	M03A0318	18.		112.		.1		.2		3.		.5		2.		.1		2.		1.3		.2		3.	
23-Mar-95	M03A0319	19.		119.		.1		.2		2.		.5		2.		.1		3.		1.3		.2		4.	
27-Mar-95	M03A0320	14.		130.		.1		3.		2.		.5		22.		.1		5.		1.3		.2		40.	
30-Mar-95	M03A0321	19.	19.3	132.	122	.1	.2	2.	1.	2.	2.	.5	.7	25.	12.9	.1	.1	6.	4.1	1.3	1.2	.2	.3	8.	10.1
3-Apr-95	M03A0322	17.	18.7	127.	122	.1	.2	.2	.8	2.	2.1	.5	.7	9.	12.2	.1	.1	1.	3.3	1.3	1.2	.2	.2	15.	11.1
6-Apr-95	M03A0323	23.	19.3	102.	119	.1	.1	.2	.7	1.	1.9	.5	.5	4.	12.3	.1	.1	1.	3.1	1.3	1.3	.2	.2	4.	10.7
10-Apr-95	M03A0324	12.	18.	157.	124	.1	.1	2.	.9	2.	2.	2.	.7	32.	15.4	.1	.1	4.	3.1	1.3	1.3	.2	.2	8.	10.9
13-Apr-95	M03A0325	44.	21.	107.	122	.1	.1	1.	1.	2.	2.1	.5	.7	11.	12.1	.1	.1	6.	3.4	1.3	1.3	.2	.2	3.	10.7
17-Apr-95	M03A0326	26.	21.3	171.	129	.1	.1	14.	2.5	2.	2.	1.	.7	108.	23.9	.1	.1	14.	4.7	1.3	1.3	.2	.2	17.	11.3
20-Apr-95	M03A0327	24.	22.	129.	130	.7	.2	7.	3.3	9.	2.7	2.	.9	43.	28.4	.1	.1	10.	5.6	1.3	1.3	.2	.2	34.	14.8
24-Apr-95	M03A0328	21.	22	115.	130.	.1	.2	7.	4.	1.	2.6	.5	.9	38.	32.4	.1	.1	6.	5.9	1.3	1.3	.2	.2	4.	14.8
27-Apr-95	M03A0329	24.	23.3	110.	128	.1	.2	2.	3.9	2.	2.6	.5	.9	12.	31.3	.1	.1	7.	6.1	1.3	1.3	.2	.2	9.	11.3
1-May-95	M03A0330	16.8	23.1	106.	125	1.1	.3	.7	3.8	.7	2.4	.5	.9	6.8	29.3	.1	.1	8.5	6.4	.8	1.2	.5	.2	.2	10.5
4-May-95	M03A0331	21.	23.5	149.	127	1.1	.4	5.9	4.4	1.	2.3	.5	.9	70.4	36.1	.1	.1	7.6	7.1	.8	1.2	.5	.2	16.2	10.6
8-May-95	M03A0332	16.	22.8	126.	130.	.1	.4	1.	4.5	1.6	2.4	.5	.9	6.	36.4	.1	.1	5.	7.6	1.3	1.2	.2	.2	4.	10.6
11-May-95	M03A0334	17.	23.3	158.	130	.1	.4	3.	4.6	.9	2.2	.5	.7	22.	35.2	.1	.1	6.	7.8	1.3	1.2	.2	.2	5.	10.3
15-May-95	M03A0333	17.	20.3	141.	134	.1	.4	2.	4.7	1.	2.1	.5	.7	21.	36.4	.1	.1	5.	7.7	1.3	1.2	.2	.2	4.	10.4
18-May-95	M03A0335	18.	19.4	122.	128	.1	.4	.2	3.2	.3	1.9	.5	.7	4.	24.8	.1	.1	3.	6.5	1.3	1.2	.2	.2	1.5	8.7
22-May-95	M03A0336	14.	18.3	130.	129	.1	.3	1.	2.5	.5	1.	.5	.5	9.	21.	.1	.1	5.	5.9	1.3	1.2	.2	.2	7.	5.7
29-May-95	M03A0337	16.	17.8	176.	135	.1	.3	2.	2.	.3	.9	.5	.5	27.	19.8	.1	.1	1.	5.3	2.8	1.3	.2	.2	4.	5.7
5-Jun-95	M03A0338	12.	16.4	191.	144	.1	.3	2.	2.	1.	.8	.5	.5	18.	20.5	.1	.1	4.	5.	1.3	1.3	.2	.2	5.	5.2
12-Jun-95	M03A0339	13.	16.	204.	155	.1	.2	1.	2.	1.	.8	.5	.5	2.5	20.	.1	.1	4.5	4.6	1.3	1.4	.2	.2	3.	5.5
19-Jun-95	M03A0340	14.	15.2	213.	162	.1	.1	1.	1.5	.8	.8	.5	.5	6.	12.8	.1	.1	5.	4.3	1.3	1.4	.2	.2	1.5	3.9
26-Jun-95	M03A0341	15.	15.1	155.	166	.1	.1	.7	1.4	.7	.7	4.	.9	2.	12.4	.1	.1	4.	4.2	1.3	1.4	.2	.2	6.	4.1
2-Jul-95	M03A0342	17.	15.1	122.	162	.1	.1	1.5	1.3	.5	.7	1.	.9	10.	11.1	.1	.1	5.	4.1	1.5	1.4	.2	.2	6.	4.2
10-Jul-95	M03A0343	13.	14.7	173.	165	.2	.1	.7	1.1	.9	.7	.5	.9	2.	8.9	.1	.1	5.	4.1	1.2	1.4	.2	.2	5.	4.3
17-Jul-95	M03A0344	13.	14.1	172.	171	.1	.1	.9	1.2	1.	.7	.5	.9	2.5	8.8	.1	.1	4.8	4.3	1.2	1.4	.2	.2	2.9	4.5
24-Jul-95	M03A0345	18.	14.6	175.	176	.1	.1	.7	1.2	.9	.8	.5	.9	1.3	7.9	.1	.1	6.6	4.4	1.2	1.4	.2	.2	5.5	4.3
31-Jul-95	M03A0346	12.	14.1	193.	178	.1	.1	.9	1.	.9	.8	2.8	1.2	5.2	5.5	.1	.1	4.6	4.8	1.1	1.2	.2	.2	3.7	4.3
7-Aug-95	M03A0347	17.	14.7	204.	179.	1.	.2	1.5	1.	.9	.8	.5	1.2	6.6	4.2	.1	.1	5.1	5.	1.2	1.2	.2	.2	7.8	4.6
14-Aug-95	M03A0348	15.	14.9	202.	179	.1	.2	.2	.9	.9	.8	.5	1.2	5.3	4.5	.1	.1	2.8	4.8	1.2	1.2	.2	.2	6.8	5.
21-Aug-95	M03A0349	13.	14.8	190.	176	.1	.2	.2	.8	.9	.8	.5	1.2	1.3	4.	.1	.1	4.	4.7	1.2	1.2	.2	.2	.5	4.9
28-Aug-95	M03A0350	12.	14.4	204.	182	.1	.2	.9	.8	.9	.8	.5	.8	4.4	4.3	.1	.1	3.7	4.6	1.2	1.2	.2	.2	3.3	4.6

Metals values in PPB

2.2 Problem Areas and Recommended Solutions

Problem	Solution
Maintain high level of safety awareness.	Daily raffle ticket program. Daily safety meetings. Safety meeting participation. Training. Regular HAZOP's.
On-the-Job safety attention.	Contact all employees at least twice per day on safety issues. Review job details as work proceeds. Stop and challenge approach. Constant emphasis and reminders.
Hazard detection and response.	Safety inspections. HAZOP's on all jobs. Constant awareness and follow-up.
Increase circulation in specific S1 and INT target areas.	Add new pumping and/or injection wells. Make well conversions to alternative functions. Set up several wells to cycle functions.
Modeling of 10-year natural flushing impact.	Complete several trial modeling runs; develop baseline values for DO and on-biodegradable TOC.
Long-term site management.	Develop long-term site management plan.
Site closure plan.	Develop table of contents for review.

2.3 Problems Resolved

Problem	Solution
Wetlands re-vegetation.	Completed field work.

Problem	Solution
Affected soil adjacent to wetlands project.	The City of Baytown will manage as per TNRCC guidelines.

2.4 Deliverables Submitted

July, 1995 monthly report
Closure report table of contents
Final INT-11 wall test report

2.5 Upcoming/Ongoing Events and Activities

Daily safety meetings and inspections.

Daily safety awareness program.

Emphasis on multiple work assignments.

Emphasis on hazard identification and response.

Attention to safety details.

Increase nutrient and oxygen circulation in specific INT areas.

Continue focused remediation in S1 and INT target areas.

Convert wells to alternative functions to focus remediation.

Daily well pump checks and maintenance.

Aquifer compliance sampling in select areas and zones.

Determine non-toxic, non-manageable TOC across the site.

Run natural attenuation modeling cases at 50 ppm, 100 ppm, and 200 ppm baseline TOC.

Injection of Cell D water.

Evaluate vegetation in Lagoon area.

Evaluate lagoon surface water source options.

Operate Data Base Management System.

Total Quality process.

Minimize carbon usage in Water Treatment Plant.

Update long-term site management plan.

Develop lagoon closure plan.

Submit MCC-1 area remediation report.

Continue brackish marsh area re-vegetation evaluation.

2.6 Key Staffing Changes

None.

2.7 Percent Complete

Research & Development	- 98%
Facilities	-100%
Slough	-100%
Subsoil Investigation	-100%
Floodwall	-100%
Lagoon Remediation	-100%
Groundwater	- 88%
Lagoon Dewatering/Fixation	-100%
Water Treatment	- 85%
Wetlands	- 98%
Demobilization	- 70%
Monitoring	- 68%

2.8 Schedule

All deliverables are on schedule.

Submit site closure plan by October 15, 1995.

Complete active aquifer remediation by December 15, 1995.

2.9 Operations and Monitoring Data

The operations and monitoring data are submitted as parts of Sections 3.0, 4.0, 5.0, and 6.0 of this report, and the supporting data are stored in secure storage at the French project office.

2.10 Credits Accrued/Applied

Status of Credits

	Accrued this period	Accrued to date	Applied this period	Applied to date	Running total
December 1990	34	34	0	0	34
December 1991	0	100	0	0	100
December 1992	0	101	0	2	99
December 1993	0	104	0	4	100
January 1994	0	104	0	4	100
February 1994	0	104	0	4	100
March 1994	0	104	0	4	100
April 1994	0	104	0	4	100
May 1994	0	104	0	4	100
June 1994	0	104	0	4	100
July 1994	5	109	0	4	105
August 1994	0	109	0	4	105
September 1994	0	109	0	4	105
October 1994	0	109	0	4	105
November 1994	0	109	0	4	105
December 1994	0	109	0	4	105
January 1995	0	109	0	4	105
February 1995	0	109	0	4	105
March 1995	0	109	0	4	105
April 1995	0	109	0	4	105
May 1995	0	109	0	4	105
June 1995	0	109	0	4	105
July 1995	0	109	0	4	105
August 1995	2	111	0	4	107

2.11 Community Relations

Maintained 24-hour, call-in Hot Line.

Conducted five tours for interested parties.

Contacted nearby local residents with update on site activities.

Contacted two Riverdale residents with well sampling results.

Supported Barrett Chamber of Commerce development project.

Supported Crosby wetlands education program.

3.0 LAGOON

3.1 Summary of Activities

Evaluating test plots of various plants in Cell E.

Injected about 135,300 gallons of "clean" Cell D water in Cell E subsurface.

Operated aerator in Cell D to expedite biomass degradation.

Evaluating various options for gradient control inside the lagoon.

Evaluating several surface water source options for the area inside the migration wall.

Continued dismantling and disposal of scrap piping.

3.2 Problems and Response Action

Problem	Recommended Solution
Ground cover growth slow in Cell E.	Water frequently. Evaluate different grass blends and soil nutrients.
Poor tree growth in Cell E.	Evaluate different types of trees. Design an irrigation system.
Surface water source.	Develop list of options; evaluate realistic options.

3.3 Problems Resolved

None.

3.4 Deliverables Submitted

None.

3.5 Upcoming Events and Activities

Maintain pH, DO, OUR, and nutrient levels in Cell D.

Operate aerator/mixer in Cell D as required.

Inject Cell D water in Cell E subsurface.

Water Cell E and Cell F as required, using the east slough surface water.

Maintain vegetation in Cell E.

Dismantle and dispose of surplus pipe.

Evaluate surface water source options.

4.0 GROUNDWATER AND SUBSOIL REMEDIATION

4.1 Summary of Activities

4.1.1 Operation of Production and Injection Well Systems

Operation of the production and injection wells systems during August, 1995, is summarized in Table 4-1. Flows from the production well system are summarized in Table 4-2 and Figure 4-1. Flows into the injection well system are summarized in Table 4-3 and Figure 4-2. Individual well flows are summarized in Table 4-4.

4.1.2 Operational Monitoring

Operational monitoring associated with the groundwater and subsoil remediation system during August, 1995, is summarized in Table 4-5.

4.1.3 Data Management and Evaluation

Operational monitoring data from the groundwater and subsoil remediation system for this reporting period were entered into FLTG's database. Tables and figures for this section of the Monthly Progress Report were generated from this database.

4.2 Problems and Response Actions

Groundwater production and injection rates were at or above the targets of both production and injection wells. The new goal for production well rates is 80 gpm. See Table 4-1. Nutrient and dissolved oxygen concentrations in injection water were at or close to target levels. No specific response action is planned.

TABLE 4-1

Groundwater System Operation - August 1995 *Reporting Period: August 1-31 (31 days)*
Production System
No. of production wells: 120 (S1 unit, 53; INT unit, 67) No. of operational wells by end of month: 56 (S1 unit, 10; INT unit, 46)
Changes in system since last month: converted INT-3 back to pumping; converted INT-20 and -22 to injection; converted INT-120 to pumping; shut off S1-25, -26, -27, -28, and INT-62
No. of wells off line having reached criteria: 44 16 wells off inside lagoon
Groundwater produced: 3.6 M gal; 268.0 M gal since startup based on main meter Total production rate: avg. 72.5 gpm (target 80 gpm); range 73-100 gpm S1 production rate: avg. 38.6 gpm; avg. 3.9 gpm per metered well INT production rate: avg. 33.9 gpm; avg. 0.8 gpm per metered well Total flow rate apportioned between S1 and INT units based on individual well meter readings; average flows based on 31 days operation
TOC (non-volatile) concentration avg. 42 ppm; range 34-91 ppm TOC mass removed: 1,278 lb. (372,670 lb. since startup); 42 lb./day
Injection System
No. of injection wells: 72 (S1 unit, 22 [9 on line]; INT unit, 50 [30 on line])
Rainfall during period: 4.13 inches
Changes in system since last month: converted INT-20, -22 to injection; converted INT-3 to pumping, shut off INT-82, -83, and -84
Groundwater injected: 4.0 M gal (168.2 M gal since startup) based on main meters
S1 unit injected: 1.3 M gal (89.8 M gal since startup) INT unit injected: 2.7 M gal (75.5 M gal since startup) Total injection rate: avg. 89 gpm (target 90 gpm); range 63-102 gpm S1 injection rate: avg. 45.0 gpm; avg. 5.0 gpm per well INT injection rate: avg. 47.1 gpm; avg. 1.6 gpm per well Total flow rate apportioned between S1 and INT units based on individual well meter readings; average flows based on 31 days operation
Oxygen added to injection water: 9,987 lb.; 322.2 lb./day used (input efficiency = 19%) Avg. DO in injection water: S1, 58.5 ppm; INT, 53.6 ppm (target 40 ppm) ⇒ 59.8 lb./day injected
Volume of 9.1% w/w KNO_3 nutrient solution added to INT unit, and 3 S1-North wells: 8,332 gal Nutrient flow rate: 268.8 gpd, 0.33% of INT + S1-North inflow rate (target 0.38%) Calculated injection water NO_3 concentration: 83.4 mg/L-N (target 50 mg/L-N)

Note that average monthly flow rates at individual wells (calculated from weekly individual well flow meter readings) are not used directly to determine S1 and INT unit inflows and outflows, but are used to apportion total production and injection flows (calculated from daily main production and injection meter readings) between S1 and INT units. Average flows are based on the 31 day reporting period.

TABLE 4-2

Daily Groundwater Production and TOC Removal
August 1995

Date	Project Day	T-101 Outflow Rate (FQ-101A) (gpd)	T-101 Outflow Rate (gpm)	T-101 Influent Ave. TOC (mg/L)	T-101 Influent TOC Loading (kg/day)
1-Aug	1301	140,500	98	91	48
2-Aug	1302	144,000	100	45	25
3-Aug	1303	113,100	79	39	17
4-Aug	1304	115,300	80	42	18
5-Aug	1305	113,700	79	41	18
6-Aug	1306	117,400	82	37	16
7-Aug	1307	114,900	80	35	15
8-Aug	1308	113,900	79	58	25
9-Aug	1309	105,400	73	59	24
10-Aug	1310	105,300	73	45	18
11-Aug	1311	110,200	77	37	15
12-Aug	1312	115,500	80	37	16
13-Aug	1313	120,000	83	37	17
14-Aug	1314	115,200	80	40	17
15-Aug	1315	114,600	80	48	21
16-Aug	1316	115,400	80	43	19
17-Aug	1317	115,100	80	47	20
18-Aug	1318	111,700	78	41	17
19-Aug	1319	120,100	83	38	17
20-Aug	1320	119,100	83	39	18
21-Aug	1321	108,100	75	39	16
22-Aug	1322	109,500	76	35	15
23-Aug	1323	109,600	76	34	14
24-Aug	1324	115,300	80	42	18
25-Aug	1325	139,900	97	34	18
26-Aug	1326	129,300	90	33	16
27-Aug	1327	119,300	83	29	13
28-Aug	1328	112,600	78	29	12
29-Aug	1329	110,100	76	53	22
30-Aug	1330	131,500	91	34	17
31-Aug	1331	117,700	82	36	16
Month Average		117,526	82	42	19
Month Total		3,643,300		1278 lb	580

TABLE 4-3

Daily Injection Flows
August 1995

Date	Project Day	INT South S1 North Injection Wells FQ905		INT North Injection Wells Meter FQ-906		S1 South Injection Wells Meter FQ-909		Total Injection Rate		Oxygen	Nutrients
		(gpd)	(gpm)	(gpd)	(gpm)	(gpd)	(gpm)	(gpd)	(gpm)	lbs	Gallons
1-Aug	1301	46,500	32	46,000	32	47,200	33	139,700	97	300	277
2-Aug	1302	43,500	30	45,300	31	46,500	32	135,300	94	395	293
3-Aug	1303	41,900	29	44,800	31	45,800	32	132,500	92	300	274
4-Aug	1304	41,800	29	46,000	32	46,300	32	134,100	93	300	293
5-Aug	1305	40,300	28	44,200	31	45,800	32	130,300	90	300	281
6-Aug	1306	40,600	28	47,000	33	46,700	32	134,300	93	300	285
7-Aug	1307	28,000	19	31,400	22	31,600	22	91,000	63	300	163
8-Aug	1308	39,800	28	45,000	31	44,700	31	129,500	90	300	308
9-Aug	1309	38,800	27	44,400	31	44,800	31	128,000	89	300	274
10-Aug	1310	37,500	26	39,100	27	43,300	30	119,900	83	300	255
11-Aug	1311	37,800	26	49,900	35	43,600	30	131,300	91	400	266
12-Aug	1312	37,100	26	45,200	31	42,400	29	124,700	87	360	270
13-Aug	1313	39,400	27	45,300	31	45,000	31	129,700	90	300	266
14-Aug	1314	39,400	27	47,900	33	45,600	32	132,900	92	335	281
15-Aug	1315	38,600	27	45,500	32	44,600	31	128,700	89	300	296
16-Aug	1316	38,300	27	46,700	32	44,800	31	129,800	90	295	312
17-Aug	1317	37,400	26	44,200	31	43,500	30	125,100	87	300	285
18-Aug	1318	37,600	26	45,500	32	43,200	30	126,300	88	325	278
19-Aug	1319	57,400	40	45,400	32	44,700	31	147,500	102	300	270
20-Aug	1320	39,300	27	45,900	32	43,900	30	129,100	90	280	304
21-Aug	1321	38,000	26	45,400	32	44,600	31	128,000	89	320	236
22-Aug	1322	41,000	28	47,000	33	45,700	32	133,700	93	300	270
23-Aug	1323	41,900	29	44,500	31	44,400	31	130,800	91	400	266
24-Aug	1324	41,700	29	44,000	31	43,300	30	129,000	90	262	300
25-Aug	1325	41,100	29	45,100	31	41,000	28	127,200	88	395	270
26-Aug	1326	37,900	26	44,300	31	37,800	26	120,000	83	300	240
27-Aug	1327	38,900	27	44,500	31	37,500	26	120,900	84	300	225
28-Aug	1328	39,600	28	45,000	31	37,600	26	122,200	85	360	270
29-Aug	1329	39,600	28	44,700	31	39,900	28	124,200	86	360	262
30-Aug	1330	39,600	28	45,900	32	44,000	31	129,500	90	300	205
31-Aug	1331	39,400	27	44,700	31	43,100	30	127,200	88	400	258
Month Average		39,990	28	44,832	31	43,319	30	128,142	89	322	269
Month Total		1,239,700		1,389,800		1,342,900		3,972,400		9,987	8,332

TABLE 4-4

Average Production and Injection Flow Rates - August 1995

Flow rates are averages for the period August 1 - August 31 (31 days)

S1 Production Wells (10)

Well ID	gpm
S1-1	OFF
S1-2	OFF
S1-3	OFF
S1-4	OFF
S1-5	OFF
S1-6	OFF
S1-7	OFF
S1-8	OFF
S1-9	OFF
S1-10	OFF
S1-11	OFF
S1-12	OFF
S1-13	OFF
S1-14	OFF
S1-15	OFF
S1-16	OFF
S1-17	1.3
S1-19	1.3
S1-20	OFF
S1-21	OFF
S1-22	0.9
S1-23	OFF
S1-24	OFF
S1-25	OFF
S1-26	OFF
S1-27	OFF
S1-28	OFF
S1-29	1.7
S1-30	6.9
S1-31	OFF
S1-32	2.9
S1-33	OFF
S1-34	OFF
S1-35	OFF
S1-36	OFF
S1-37	OFF
S1-38	OFF
S1-39	OFF
S1-40	OFF
S1-41	OFF
S1-42	OFF
S1-43	OFF
S1-44	OFF
S1-45	OFF
S1-46	OFF
S1-47	OFF
S1-48	OFF
S1-60	OFF
S1-61	4.4
S1-62	9.9
S1-63	7.7
S1-64	1.8
Total	38.8
Average*	3.9

* of metered wells

S1 Injection Wells (9)

Well ID	gpm
S1-18	2.8
S1-20	3.8
S1-31	4.1
S1-49	OFF
S1-50	OFF
S1-51	OFF
S1-52	OFF
S1-53	OFF
S1-54	OFF
S1-55	4.0
S1-56	OFF
S1-57	OFF
S1-58	OFF
S1-59	OFF
S1-65	10.3
S1-66	OFF
S1-67	OFF
S1-68	OFF
S1-69	6.2
S1-70	4.5
S1-101	5.3
S1-133	6.0
Total	46.0
Average	6.0

Wells S1-18, S1-31 and S1-133 receive oxygen and nutrient amended injection water

Subtotal	11.9

All other S1 wells receive oxygenated injection water only

Notes
OFF - well inoperative

INT Production Wells (44)

Well ID	gpm
INT-1	0.4
INT-3	0.4
INT-4	0.1
INT-5	OFF
INT-6	OFF
INT-7	0.3
INT-8	1.4
INT-9	0.8
INT-10	3.0
INT-11	0.2
INT-12	1.2
INT-13	0.4
INT-14	OFF
INT-15	OFF
INT-16	OFF
INT-17	OFF
INT-18	OFF
INT-19	0.1
INT-21	0.1
INT-23	0.1
INT-24	0.4
INT-25	OFF
INT-26	1.1
INT-27	1.4
INT-28	0.5
INT-29	OFF
INT-30	OFF
INT-31	OFF
INT-32	OFF
INT-33	OFF
INT-55	1.0
INT-56	0.2
INT-57	0.2
INT-58	OFF
INT-59	0.3
INT-60	1.9
INT-61	0.9
INT-62	OFF
INT-65	OFF
INT-66	OFF
INT-120	0.2
INT-143	0.2
INT-205	1.0
INT-206	0.6
INT-207	0.6
INT-208	3.1
INT-209	0.2
INT-210	1.4
INT-211	OFF
INT-212	1.7
INT-213	1.9
INT-214	OFF
INT-215	2.0
INT-216	OFF
INT-217	1.6
INT-228	0.6
INT-229	0.6
INT-230	0.7
INT-231	1.1
INT-232	0.2
INT-233	0.1
INT-234	0.4
INT-235	0.2
INT-236	0.6
Total	36.4
Average	0.8

INT Injection Wells (30)

Well ID	gpm
INT-2	0.9
INT-20	1.4
INT-22	0.5
INT-63	2.5
INT-64	2.4
INT-71	OFF
INT-72	0.9
INT-73	1.8
INT-74	2.1
INT-75	0.1
INT-76	3.8
INT-77	3.9
INT-78	2.7
INT-79	0.7
INT-80	1.2
INT-81	3.7
INT-82	OFF
INT-83	OFF
INT-84	OFF
INT-85	OFF
INT-86	OFF
INT-87	OFF
INT-88	OFF
INT-89	OFF
INT-90	OFF
INT-91	OFF
INT-92	OFF
INT-93	OFF
INT-94	OFF
INT-95	OFF
INT-96	OFF
INT-97	0.6
INT-98	1.7
INT-99	OFF
INT-100	OFF
INT-113	1.0
INT-201	OFF
INT-202	OFF
INT-203	0.3
INT-204	1.0
INT-218	0.8
INT-219	1.4
INT-220	1.2
INT-221	0.8
INT-222	2.8
INT-223	1.2
INT-224	2.8
INT-225	2.0
INT-226	0.5
INT-227	0.6
Total	47.1
Average	1.6

All INT injection wells receive oxygen- and nutrient-amended injection water

Note: total and average flow rates for S1 and INT units are corrected (per main flow meter readings) for use in Table 4-1.

TABLE 4-5

Operational Monitoring - August 1995

Activity	Frequency	Purpose
Check production and injection wells for pump, meter, and level control operation, injection pressure, and gas buildup.	Daily	Identify and respond to individual well problems; maintain operating efficiency.
Flow meter readings	Weekly	Identify and respond to individual well problems; maintain operating efficiency.
Read groundwater treatment plant inflow and outflow meters; nutrient injection flow meters; oxygen flows, pressure and temperature; and injection header back pressure.	2x daily	Identify and respond to treatment plant problems; control nutrient and injection flow rates.
Measure T-101 influent TOC.	2x daily	Track TOC removal.
Measure dissolved oxygen at 6 representative S1 and INT injection wells.	Weekly	Control oxygen injection.
Conduct water levels DO and TOC on 22 monitoring wells.	Weekly	Define progress of new INT wells and shut-off areas. Track DO breakthru.
Conduct water levels on shut-off wells.	Monthly	Track level recovery in shut-off wells.
Conduct TOC and DO on select production wells.	Weekly	Track TOC and DO levels in critical areas.

FIGURE 4-1

Production Flows

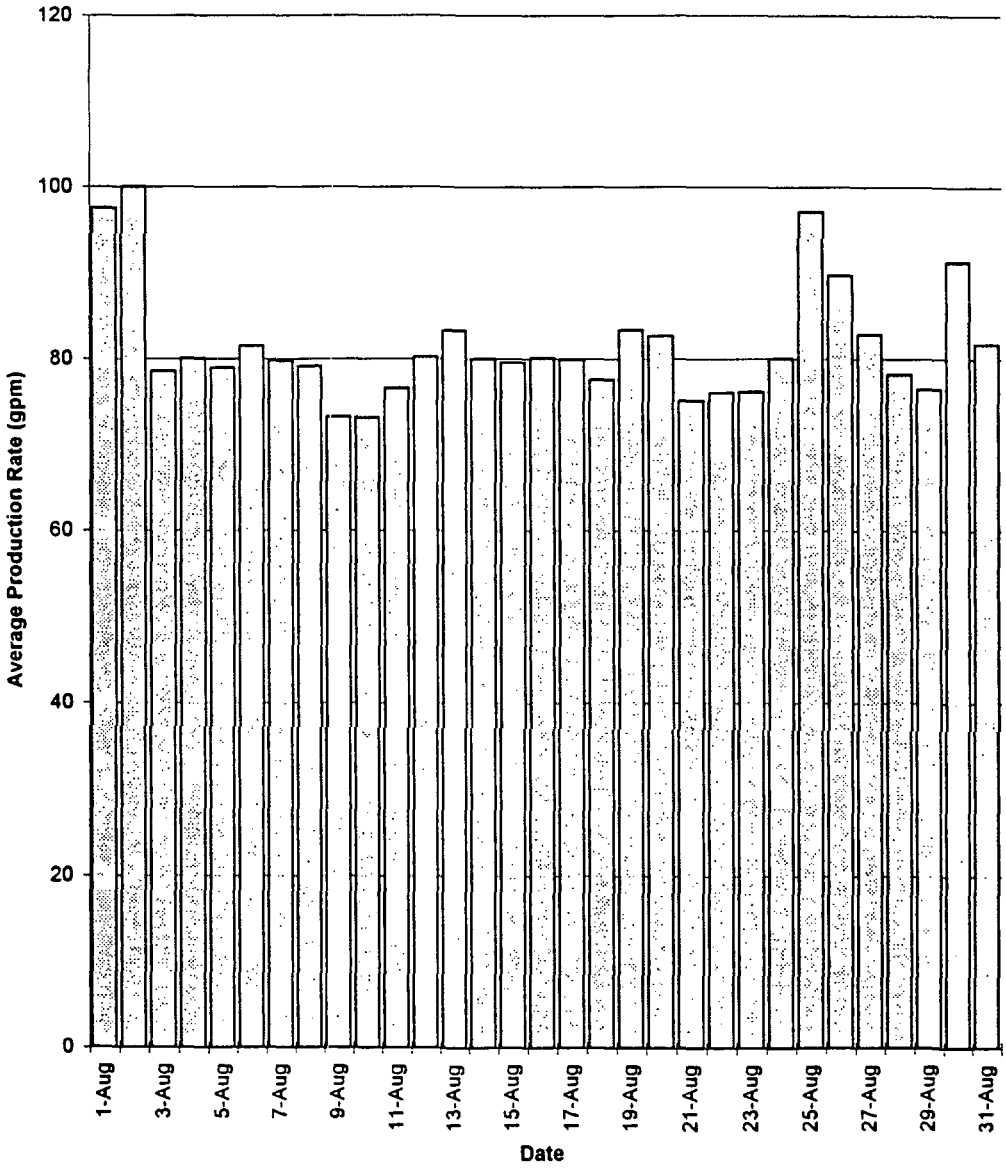


FIGURE 4-2

Injection Flows

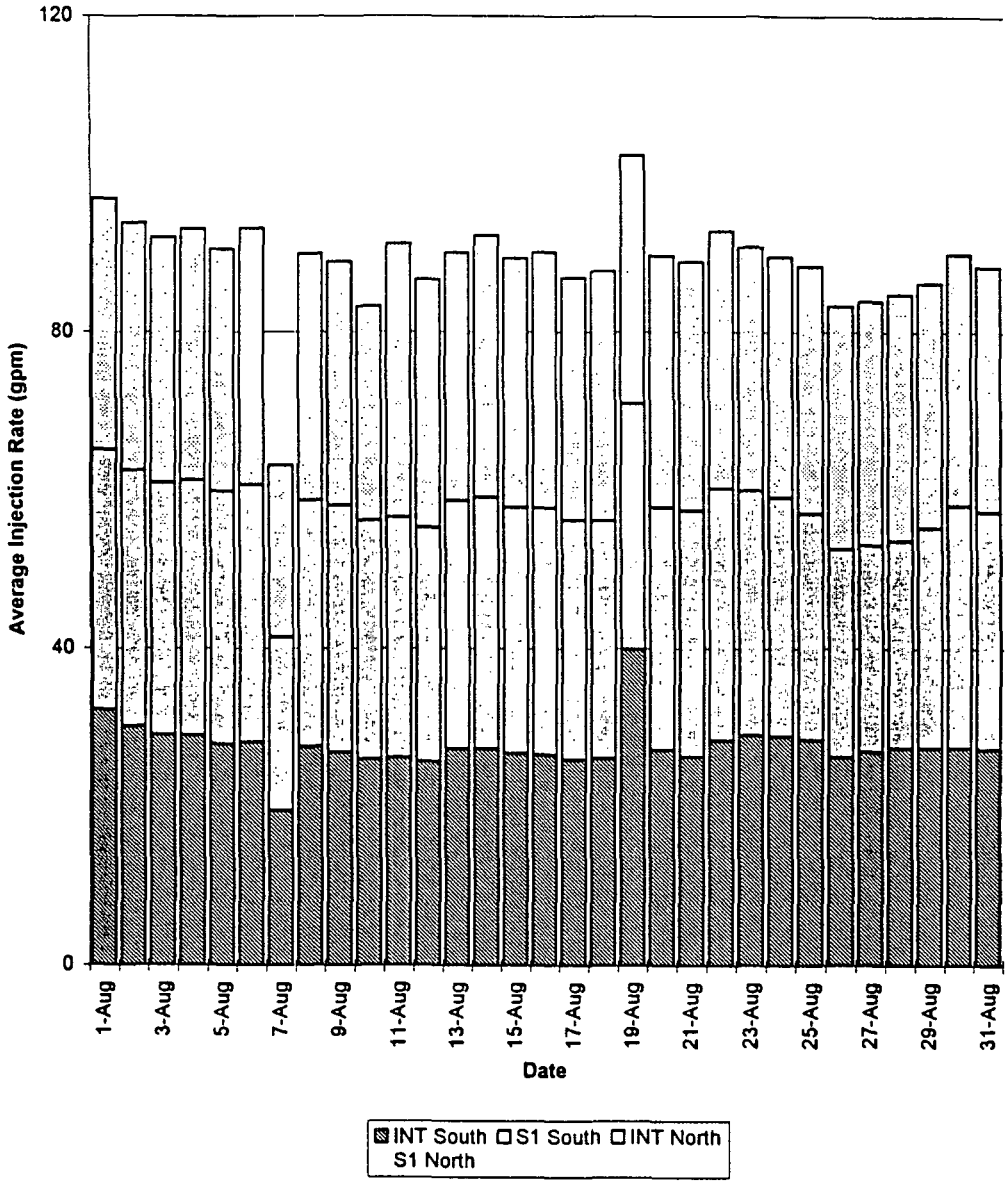


TABLE 4-6

Schedule for Shut-Down of INT and S1 Pumping and Injection Wells

Date	Well #	Type (Prod. or Inj.)	Meter Reads	Flow Rate (gpm)	Operator tagged out
01-94	S1-35	Production			MC
	S1-43	Production			MC
05-94	S1-33	Production			MC
06-94	S1-34	Production			MC
06-94	S1-36	Production			MC
	S1-37	Production			MC
	S1-38	Production			MC
06-94	S1-42	Production			MC
	S1-23	Production			MC
	S1-5	Production			MC
12-94	S1-1	Production			WW
	S1-2	Production			WW
	S1-3	Production			WW
	S1-4	Production			WW
	S1-6	Production			WW
12-94	S1-7	Production			WW
	S1-8	Production			WW
	S1-9	Production			WW
	S1-10	Production			WW
12-94	S1-11	Production			WW
	S1-12	Production			WW
	S1-13	Production			WW
	S1-14	Production			WW
12-94	S1-15	Production			WW
	S1-16	Production			WW
	S1-58	Injection	Leaking seal		WW
January, 1995 converted S1-1 thru S1-9 to injection for recharge water table for vegetation.					
02-18-95	S1-49	Injection		1.30	
	S1-39	Production		8.50	
	S1-60	Production		4.50	
	S1-48	Production		2.50	
	INT-17	Production		0.12	

TABLE 4-6 (Continued)

Schedule for Shut-Down of INT and S1 Pumping and Injection Wells

Date	Well #	Type (Prod. or Inj.)	Meter Reads	Flow Rate (gpm)	Operator tagged out
02-19-95	INT-85	Injection		0.33	
	INT-86	Injection		1.00	
	INT-16	Production		0.16	
	S1-50	Injection		1.85	
	S1-19	Production		3.40	back on 2/22/95
02-20-95	S1-56	Injection		3.85	
	S1-57	Injection		2.50	
	INT-87	Injection		0.51	
	INT-88	Injection		1.33	
	INT-89	Injection		1.10	
02-21-95	S1-46	Production		20.0	
	INT-15	Production		0.85	
	INT-90	Injection		2.75	
	INT-100	Injection		0.10	
02-22-95	INT-99	Injection		2.75	
	INT-91	Injection		1.69	
	INT-92	Injection		3.00	
	INT-93	Injection		1.00	
02-23-95	INT-94	Injection		0.08	
	INT-95	Injection		1.30	
	INT-96	Injection		1.00	
	S1-44	Production		9.00	
02-24-95	INT-201	Injection		1.21	
	S1-51	Injection		0.70	
	INT-33	Production		0.18	
	S1-40	Production		10.0	
02-25-95	S1-52	Injection		1.12	
	S1-53	Injection		1.75	
	INT-32	Production		1.00	
	INT-31	Production		1.55	
02-26-95	S1-41	Production		9.00	
	S1-45	Production		3.00	
	INT-30	Production		1.63	
	INT-29	Production		3.00	

TABLE 4-6 (Continued)

Schedule for Shut-Down of INT and S1 Pumping and Injection Wells

Date	Well #	Type (Prod. or Inj.)	Meter Reads	Flow Rate (gpm)	Operator tagged out
02-27-95	INT-25	Production		0.40	
	INT-214	Production		5.10	
	INT-211	Production		1.90	
	INT-216	Production		0.70	
02-28-95	S1-24	Production		7.00	
	S1-31	Production		3.50	
	S1-47	Production		2.01	
	S1-18	Production		1.67	
4-13-95	INT-14	Production		.15	
	INT-18	Production		.44	
	INT-65	Production		.80	
	INT-66	Production		1.70	
6-5-95	S1-20	Production		3.81	
	S1-21	Production		11.02	
	S1-66	Injection		5.6	
	S1-67	Injection		8.0	
6-12-95	S1-59	Injection		5.7	
	S1-68	Injection		3.4	
7-15-95	INT-202	Injection		1.1	
8-1-95	S1-25	Production		3.0	
	S1-26	Production		4.5	
	S1-27	Production		1.3	
	S1-28	Production		4.1	
8-2-95	INT-82	Injection		0.2	
	INT-83	Injection		1.1	
	INT-84	Injection		2.2	
	INT-62	Production		0.4	

4.3 Pending Issues

4.3.1 S1 Unit Pulse Pumping

No wells are on a pulse pump program this period. Schedule of well shut-off is included as Table 4-6.

4.4 Operational Refinements

Shut off INT-62 and S1-25, -26, -27, and -28 for meeting criteria. Converted INT-3 back to pumping. Converted INT-120 to pumping well. Converted INT-20 and -22 to injection wells.

4.5 Data Summary and Discussion

4.5.1 Groundwater Production and Injection

Groundwater production target rates were adjusted to 80 gpm to compensate for the expanded shut-off. Injection target rates were adjusted to 90 gpm to compensate for the shut off.

4.5.2 Groundwater Levels and Flow Directions

The current extent of contaminated groundwater is contained within the S1 and INT extraction system capture zones.

4.5.3 TOC in shallow groundwater

TOC analyses on production wells were completed the first week in August. The analyses are in Table 4-7 and Table 4-8. There was a slight increase in TOC levels when the new INT wells were placed on line.

4.5.4 In-Situ Bioremediation

The emphasis continues to be to maximize delivery of oxygen and nutrients to the INT system. Dissolved oxygen analysis was conducted on the monitoring wells during the third well volume pumped.

4.6 Schedule

Drill and install two INT injection wells at west end. A program to close out/plug and abandon S1 wells south of Gulf Pump Road was started the latter part of this reporting period. Wells closed out and prepared for P & A in August were: S1-60, -48, -47, -46, -45, -44, -43, -42; injection wells S1-54, INT-31, and -66. Wells scheduled for close out

are: S1-41, -40, -39, -38, -37, -36, -35, and -34; INT-31, -30, -29, -28, -211, and -214. See attached program as Attachment 4A.

TABLE 4-7

HISTORY OF TOC CONCENTRATIONS
AT S1 PRODUCTION WELLS

Well ID	Baseline Nov-Dec 91 (ppm)	Sep 1994 (ppm)	Nov 1994 (ppm)	Dec 1994 (ppm)	Jan 1995 (ppm)	Feb 1995 (ppm)	Mar 1995 (ppm)	Apr 1995 (ppm)	May 1995 (ppm)	June 1995 (ppm)	July 1995 (ppm)	August 1995 (ppm)
S1-1	290	1,133	1,215	NS	1,592	NS	NS	NS	NS	NS	NS	NS
S1-2	190	1,251	NS	NS	1,044	NS	NS	NS	NS	NS	NS	NS
S1-3	370	566	750	NS	624	NS	NS	NS	NS	NS	NS	NS
S1-4	47	620	576	NS	582	NS	NS	NS	NS	NS	NS	NS
S1-5	51	NS	NS	NS	504	NS	NS	NS	NS	NS	NS	NS
S1-6	51	928	NS	NS	774	NS	NS	NS	NS	NS	NS	NS
S1-7	200	660	NS	NS	708	NS	NS	NS	NS	NS	NS	NS
S1-8	64	935	909	NS	708	NS	NS	NS	NS	NS	NS	NS
S1-9	77	567	NS	NS	1,520	NS	NS	NS	NS	NS	NS	NS
S1-10	46	567	2,001	NS	2,205	1,860	448	1,680	NS	NS	NS	NS
S1-11	120	2,510	1,825	NS	2,121	2,320	40	1,608	NS	NS	NS	NS
S1-12	140	2,355	1,086	NS	1,850	1,960	344	105	NS	NS	NS	NS
S1-13	520	1,077	960	NS	678	820	312	0	NS	NS	NS	NS
S1-14	590	1,440	1,000	NS	1,392	1,430	592	1,340	NS	NS	NS	NS
S1-15	5,300	2,583	1,450	NS	2,597	2,530	1,488	3,059	NS	NS	NS	NS
S1-16	8,900	NS	1,744	NS	1,050	330	138	288	NS	NS	NS	NS
S1-17	6,800	141	92	NS	73	76	72	46	29	30	10	16
S1-18	2,200	49	45	NS	24	37	72	23	NS	NS	NS	NS
S1-19	20	39	22	NS	14	16	32	18	13	NS	NS	20
S1-20	120	60	43	NS	21	16	17	6	6	NS	NS	NS
S1-21	65	42	11	NS	6	3	11	15	BDL	NS	NS	NS
S1-22	290	64	31	NS	30	55	NS	199	135	196	227	410
S1-23	350	29	20	NS	13	12	NS	7	NS	NS	NS	NS
S1-24	250	42	17	NS	13	10	NS	19	NS	NS	NS	NS
S1-25	550	33	23	NS	13	13	NS	10	27	18	17	NS
S1-26	540	49	16	NS	14	11	NS	10	25	16	22	NS
S1-27	220	88	128	NS	25	31	NS	24	34	31	3	NS
S1-28	370	21	18	NS	14	16	NS	10	31	22	21	NS
S1-29	670	33	20	NS	16	11	NS	23	31	18	1	24
S1-30	370	86	28	NS	20	22	NS	15	NS	17	28	NS
S1-31	14	29	25	NS	12	11	NS	NS	NS	NS	NS	NS
S1-32	18	73	40	NS	35	37	41	73	19	18	32	14
S1-33	10	567	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
S1-34	11	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
S1-35	24	37	NS	NS	28	NS	NS	NS	NS	NS	NS	NS
S1-36	200	39	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
S1-37	13	36	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
S1-38	59	22	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
S1-39	290	17	NS	NS	10	12	NS	NS	NS	NS	NS	NS
S1-40	150	17	18	NS	18	21	NS	NS	NS	NS	NS	NS
S1-41	170	16	NS	NS	10	16	NS	NS	NS	NS	NS	NS
S1-42	88	22	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
S1-43	4	14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
S1-44	280	28	NS	NS	9	19	NS	NS	NS	NS	NS	NS
S1-45	4,400	24	NS	NS	10	32	NS	NS	NS	NS	NS	NS
S1-46	480	24	10	NS	4	11	NS	NS	NS	NS	NS	NS
S1-47	1,200	31	NS	NS	24	28	NS	NS	NS	NS	NS	NS
S1-48	1,200	22	NS	NS	15	22	NS	NS	NS	NS	NS	NS
S1-60	48	17	NS	NS	8	14	NS	NS	NS	NS	NS	NS
S1-61	NS	366	152	NS	78	116	108	63	23	16	24	8
S1-62	NS	27	18	NS	20	14	11	3	4	7	19	10
S1-63	NS	241	150	NS	155	120	70	47	27	24	27	30
S1-64	NS	66	55	NS	44	50	43	61	52	29	36	32

NS = Not Sampled

TABLE 4-8

HISTORY OF TOC CONCENTRATIONS
AT INT PRODUCTION WELLS

Well ID	Baseline Nov-Dec 91 (ppm)	Sep 1994 (ppm)	Nov 1994 (ppm)	Dec 1994 (ppm)	Jan 1995 (ppm)	Feb 1995 (ppm)	Mar 1995 (ppm)	Apr 1995 (ppm)	May 1995 (ppm)	June 1995 (ppm)	July 1995 (ppm)	August 1995 (ppm)
INT-1	3,600	320	253	NS	204	270	273	369	172	212	185	118
INT-2	1,800	281	214	NS	91	492	563	253	692	741	435	NS
INT-3	5,200	932	1,550	NS	1,016	940	624	551	452	270	142	9
INT-4	610	430	NS	NS	198	180	209	229	149	128	145	204
INT-5	960	103	90	NS	76	70	45	87	68	72	123	150
INT-6	280	195	100	NS	76	72	46	65	68	65	74	NS
INT-7	100	101	38	NS	120	123	NS	116	102	115	96	91
INT-8	75	64	43	NS	47	45	NS	47	43	43	30	28
INT-9	800	70	NS	NS	68	58	NS	72	129	154	57	76
INT-10	1,900	82	135	NS	45	45	20	55	56	62	76	36
INT-11	590	113	31	NS	31	27	29	50.4	43	23	37	198
INT-12	3,300	74	23	NS	32	16	31	72	65	145	53	38
INT-13	590	50	23	NS	34	12	NS	11	9	11	5	6
INT-14	24	119	53	NS	39	50	54	0	NS	NS	NS	NS
INT-15	19	47	18	NS	17	16	NS	NS	NS	NS	NS	NS
INT-16	2,000	68	9	NS	6	11	NS	NS	NS	NS	NS	NS
INT-17	7	19	14	NS	8	14	NS	NS	NS	NS	NS	NS
INT-18	4	57	29	NS	24	20	31	35	NS	NS	NS	NS
INT-19	1,400	38	39	NS	56	49	NS	38	714	36	83	69
INT-20	3,500	1,182	NS	NS	1,480	1,476	1,425	998	1480	1080	719	NS
INT-21	29	190	NS	NS	204	132	540	188	200	240	137	150
INT-22	8	95	NS	NS	117	135	199	160	135	110	108	27
INT-23	16	112	NS	NS	35	40	30	NS	29	48	44	34
INT-24	240	84	65	NS	58	56	NS	47	48	42	36	NS
INT-25	36	29	NS	NS	20	18	NS	NS	NS	NS	NS	NS
INT-26	120	122	123	NS	110	108	NS	107	76	80	73	80
INT-27	180	79	80	NS	65	75	NS	65	50	52	44	44
INT-28	630	37	23	NS	22	26	NS	47	37	60	53	54
INT-29	1,100	76	58	NS	35	40	NS	NS	NS	NS	NS	NS
INT-30	1,400	45	24	NS	27	20	NS	NS	NS	NS	NS	NS
INT-31	70	82	30	NS	20	19	NS	NS	NS	NS	NS	NS
INT-32	880	22	11	NS	12	16	NS	NS	NS	NS	NS	NS
INT-33	120	20	17	NS	10	9	NS	NS	NS	NS	NS	NS
INT-55	NS	122	61	NS	65	48	NS	78	44	29	22	19
INT-56	NS	297	148	NS	132	120	NS	131	104	73	89	94
INT-57	NS	66	51	NS	75	68	NS	55	61	54	31	31
INT-58	NS	34	33	NS	28	29	NS	26	21	23	25	NS
INT-59	NS	79	49	NS	50	42	NS	61	43	47	43	34
INT-60	NS	110	85	NS	86	80	NS	90	75	73	73	70
INT-61	NS	39	40	NS	31	31	NS	32	27	39	27	20
INT-62	NS	35	43	NS	29	20	NS	28	25	64	64	NS
INT-65	NS	66	61	NS	51	41	NS	50	NS	NS	NS	NS
INT-66	NS	120	94	NS	94	85	NS	51	NS	NS	NS	NS
INT-143	NS	NS	NS	NS	NS	NS	NS	NS	NS	11	14	5
INT-205	NS	61	39	NS	34	34	NS	50	42	39	36	34
INT-206	NS	107	88	NS	68	60	NS	51.5	46	20	20	13
INT-207	NS	45	60	NS	74	92	95	100.1	70	69	72	58
INT-208	NS	22	16	NS	11	18	NS	16	NS	10	11	8
INT-209	NS	37	19	NS	13	17	NS	5	4.3	1.5	5	2
INT-210	NS	27	28	NS	23	26	NS	28	27	20	22	23
INT-211	NS	43	46	NS	29	41	NS	NS	NS	NS	NS	NS
INT-212	NS	27	38	NS	41	38	NS	69	48	48	42	41
INT-213	NS	83	70	NS	91	143	NS	89	205	68	83	75
INT-214	NS	46	31	NS	22	28	NS	NS	NS	NS	NS	NS
INT-215	NS	82	82	NS	56	67	NS	43	44	41	28	47
INT-216	NS	34	28	NS	26	34	NS	NS	NS	NS	NS	NS
INT-217	NS	66	61	NS	60	62	NS	75	72	60	63	75
INT-228	NS	NS	NS	NS	NS	NS	NS	NS	NS	25	19	NS
INT-229	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.6	NS	2
INT-230	NS	NS	NS	NS	NS	NS	NS	NS	NS	16	NS	NS
NS = Not Sampled												
Averages												
S1	784	387	439	NS	451	336	228	337	33	34	36	63
INT	957	125	89	NS	100	105	263	111	148	105	84	57

TABLE 4-9

Dissolved Oxygen at Production Wells

Well	9/1/94	11/23/94	1/1/95	3/26/95	4/5/95	5/28/95	6/30/95	7/27/95	8/31/95
S1-1	2.1	0.8	1.6	NM	NM	NM	NM	NM	NM
S1-2	1.7	1.6	1.1	NM	NM	NM	NM	NM	NM
S1-3	1.8	1.0	1.1	NM	NM	NM	NM	NM	NM
S1-4	2.0	0.8	0.9	NM	NM	NM	NM	NM	NM
S1-5	NM	NM	1.6	NM	NM	NM	NM	NM	NM
S1-6	1.6	NM	0.8	NM	NM	NM	NM	NM	NM
S1-7	1.3	NM	1.2	NM	NM	NM	NM	NM	NM
S1-8	1.1	0.7	0.8	NM	NM	NM	NM	NM	NM
S1-9	0.8	NM	1.5	NM	NM	NM	NM	NM	NM
S1-10	0.6	0.5	1.0	NM	0.9	NM	NM	NM	NM
S1-11	1.1	0.9	1.4	NM	0.8	NM	NM	NM	NM
S1-12	1.1	1.3	1.5	NM	1.4	NM	NM	NM	NM
S1-13	1.7	1.3	1.5	NM	0.7	NM	NM	NM	NM
S1-14	1.1	0.4	0.8	NM	0.8	NM	NM	NM	NM
S1-15	1.4	0.7	0.7	NM	0.9	NM	NM	NM	NM
S1-16	NM	1.2	2.9	NM	2.7	NM	NM	NM	NM
S1-17	1.2	0.8	1.4	NM	1.7	2.0	2.9	3.8	5.2
S1-18	2.4	1.4	2.2	NM	6.8	NM	NM	NM	NM
S1-19	3.4	3.9	6.6	NM	6.5	4.2	NM	2.6	3.3
S1-20	1.6	1.7	3.2	NM	13.0	10.2	NM	NM	NM
S1-21	15+	15+	15+	NM	13.6	15+	NM	NM	NM
S1-22	1.5	0.7	1.6	NM	1.8	1.4	0.8	0.8	0.8
S1-23	1.9	1.5	4.8	NM	15.0	NM	NM	NM	NM
S1-24	0.9	2.6	1.8	NM	2.4	NM	NM	NM	NM
S1-25	0.8	0.8	1.4	NM	2.2	0.7	0.8	0.8	NM
S1-26	2.2	0.7	1.1	NM	1.4	0.7	1.0	0.7	NM
S1-27	1.4	1.9	2.0	NM	1.9	0.6	1.2	0.7	NM
S1-28	1.2	1.2	1.7	NM	5.0	0.4	1.3	2.3	NM
S1-29	1.9	2.2	4.4	NM	2.5	0.8	3.2	2.1	1.7
S1-30	1.5	1.1	4.2	NM	1.8	NM	1.0	3.4	0.9
S1-31	1.8	1.6	1.2	NM	NM	NM	NM	NM	NM
S1-32	1.4	1.5	1.6	0.6	2.2	NM	1.6	0.7	0.7
S1-33	1.4	NM	NM	NM	NM	NM	NM	NM	9.3
S1-34	1.2	NM	NM	NM	NM	NM	NM	NM	NM
S1-35	1.7	NM	1.5	NM	NM	NM	NM	NM	NM
S1-36	0.9	NM	NM	NM	NM	NM	NM	NM	NM
S1-37	1.3	NM	NM	NM	NM	NM	NM	NM	NM
S1-38	15+	NM	NM	NM	NM	NM	NM	NM	NM
S1-39	1.3	2.9	3.2	NM	NM	NM	NM	NM	NM
S1-40	2.2	1.0	2.0	NM	NM	NM	NM	NM	NM
S1-41	1.0	1.0	1.4	NM	NM	NM	NM	NM	NM
S1-42	14.0	NM	NM	NM	NM	NM	NM	NM	NM
S1-43	2.2	NM	NM	NM	NM	NM	NM	NM	NM
S1-44	1.8	6.0	1.8	NM	NM	NM	NM	NM	NM
S1-45	2.9	2.3	5.1	NM	NM	NM	NM	NM	NM
S1-46	13.5	15+	15+	NM	NM	NM	NM	NM	NM
S1-47	9.6	8.7	5.4	NM	NM	NM	NM	NM	NM
S1-48	5.3	4.2	5.0	NM	NM	NM	NM	NM	NM
S1-60	6.1	4.4	5.6	NM	NM	NM	NM	NM	NM
S1-61	1.1	0.8	1.2	0.8	2.0	2.6	2.6	13.2	15+
S1-62	1.4	2.8	12.6	NM	15.0	15+	15+	11.7	11.4
S1-63	2.2	0.9	4.0	0.9	4.2	9.7	4.2	7.7	6.7
S1-64	2.4	1.8	4.1	0.9	15.0	2.7	2.7	2.8	2.4

TABLE 4-9 (Continued)

Dissolved Oxygen at Production Wells

Well	9/1/94	11/23/94	1/1/95	3/26/95	4/5/95	5/28/95	6/30/95	7/27/95	8/31/95
INT-1	1.1	1.4	3.0	1.0	1.2	0.8	3.2	0.8	0.8
INT-2	1.5	0.8	0.8	0.4	1.4	0.4	1.1	1.0	NM
INT-3	1.0	1.0	1.4	0.4	1.7	0.6	0.8	2.6	13.6
INT-4	0.9	1.1	1.2	0.5	1.0	0.8	1.8	0.8	1.4
INT-5	2.3	1.1	1.0	1.0	1.8	0.8	1.3	0.7	0.6
INT-6	0.7	1.3	1.4	1.0	1.4	0.6	1.0	0.5	NM
INT-7	1.5	1.0	0.6	NM	0.9	0.6	1.1	0.9	0.8
INT-8	1.8	1.0	1.9	NM	1.4	0.6	1.0	0.9	1.2
INT-9	1.2	NM	1.4	NM	1.8	0.6	0.8	1.1	0.7
INT-10	1.9	1.4	1.7	0.8	2.4	0.6	3.1	2.6	4.7
INT-11	1.1	2.2	3.4	3.3	7.6	8.3	5.8	9.7	2.9
INT-12	2.2	13.8	13.8	15 +	15.0	7.2	5.0	15.0	15+
INT-13	0.9	7.8	1.6	NM	2.7	2.8	10.6	1.8	9.1
INT-14	1.8	1.7	1.7	0.7	2.4	NM	NM	NM	NM
INT-15	1.4	1.6	2.0	NM	NM	NM	NM	NM	NM
INT-16	2.1	3.0	1.8	NM	NM	NM	NM	NM	NM
INT-17	2.9	2.2	2.6	NM	NM	NM	NM	NM	NM
INT-18	1.8	1.2	1.5	NM	1.2	NM	NM	NM	NM
INT-19	2.4	1.4	1.1	NM	1.3	1.9	3.0	9.2	0.8
INT-20	1.3	0.9	1.2	0.5	1.3	0.6	1.2	0.7	NM
INT-21	1.7	2.6	3.0	0.6	0.9	0.8	1.3	3.8	1.6
INT-22	0.8	1.0	1.1	0.6	2.1	0.9	0.8	0.7	NM
INT-23	1.1	2.4	2.3	NM	NM	3.0	3.2	1.7	1.4
INT-24	1.8	2.0	2.6	NM	1.8	3.8	2.7	3.7	NM
INT-25	12.5	15+	10.2	NM	NM	NM	NM	NM	NM
INT-26	1.4	1.6	2.3	NM	1.7	2.8	1.5	2.4	2.0
INT-27	1.6	1.2	1.4	NM	1.2	1.7	0.9	1.0	1.0
INT-28	5.2	7.4	4.6	NM	1.0	1.9	1.0	0.9	0.8
INT-29	5.2	4.0	4.4	NM	NM	NM	NM	NM	NM
INT-30	9.5	9.4	1.8	NM	NM	NM	NM	NM	NM
INT-31	1.4	4.1	5.3	NM	NM	NM	NM	NM	NM
INT-32	15+	15+	15+	NM	NM	NM	NM	NM	NM
INT-33	2.5	1.9	2.5	NM	NM	NM	NM	NM	NM
INT-55	3.4	2.0	2.2	NM	0.9	1.0	2.6	1.6	5.0
INT-56	1.2	1.5	1.6	NM	0.8	0.4	1.5	0.8	1.7
INT-57	6.2	2.8	3.1	NM	2.9	0.8	5.7	2.9	0.6
INT-58	1.9	1.9	1.6	NM	1.3	0.4	1.4	1.0	NM
INT-59	2.2	2.4	3.0	NM	1.2	1.0	2.2	1.0	0.8
INT-60	1.8	1.9	2.4	NM	1.8	1.4	1.9	5.7	3.9
INT-61	2.7	1.8	2.6	NM	2.0	1.5	1.8	3.9	1.3
INT-62	1.0	2.1	2.6	NM	2.3	1.6	1.1	0.9	NM
INT-65	2.1	1.0	1.2	NM	1.6	NM	NM	NM	NM
INT-66	2.2	1.0	3.1	NM	6.8	NM	NM	NM	NM

TABLE 4-9 (Continued)

Dissolved Oxygen at Production Wells

Well	9/1/94	11/23/94	1/1/95	3/26/95	4/5/95	5/28/95	6/30/95	7/27/95	8/31/95
INT-143	NM	NM	NM	NM	NM	NM	15+	15+	15+
INT-205	1.8	1.8	2.8	NM	2.3	1.1	3.5	1.4	2.6
INT-206	1.1	2.4	1.2	NM	1.2	1.0	3.1	1.5	1.0
INT-207	4.6	1.0	1.2	NM	0.7	0.8	0.8	0.8	0.6
INT-208	1.3	3.4	11.8	NM	8.4	NM	13.0	14.4	0.9
INT-209	2.8	15+	14.8	NM	14.8	15+	15+	15+	15+
INT-210	15+	15+	15+	NM	11.6	15+	15+	14.0	15+
INT-211	1.9	2.0	2.0	NM	NM	NM	NM	NM	NM
INT-212	1.6	2.2	1.8	NM	2.2	0.7	2.4	1.0	1.2
INT-213	1.2	1.2	2.0	NM	2.8	1.2	0.9	0.7	1.0
INT-214	3.8	4.6	2.8	NM	NM	NM	NM	NM	NM
INT-215	5.2	3.6	3.0	NM	3.1	5.2	5.8	2.4	3.4
INT-216	3.4	4.2	2.7	NM	NM	NM	NM	NM	NM
INT-217	1.6	1.2	1.8	NM	1.1	1.0	1.7	1.3	0.7
INT-228	NM	NM	NM	NM	NM	NM	2.1	9.1	NM
INT-229	NM	NM	NM	NM	NM	NM	1.0	NM	NM
INT-230	NM	NM	NM	NM	NM	NM	2.0	NM	NM

TABLE 4-10

Dissolved Oxygen at Monitoring Wells

	12/15/94	2/7/95	3/25/95	4/9/95	5/4/95	6/11/95	7/27/95	8/23/95
ERT-1	1.2	NM	NM	NM	NM	NM	NM	NM
ERT-3	1.8	NM	NM	NM	NM	NM	NM	NM
ERT-7	NM	NM	NM	NM	NM	NM	NM	NM
ERT-8	2.2	NM	NM	NM	NM	NM	NM	NM
ERT-9	NM	NM	NM	NM	NM	NM	NM	NM
ERT-22	NM	NM	NM	0.6	8.4	5.6	5.2	0.2
ERT-24	2.0	NM	NM	NM	NM	NM	NM	NM
ERT-25	1.6	NM	NM	NM	NM	NM	NM	NM
ERT-26	2.3	NM	NM	NM	NM	NM	NM	NM
ERT-27	NM	NM	NM	NM	NM	NM	NM	NM
ERT-28	4.8	NM	NM	NM	NM	NM	NM	NM
ERT-29	NM	NM	NM	NM	NM	NM	NM	NM
ERT-30	NM	NM	NM	NM	NM	NM	NM	NM
ERT-33	1.1	NM	NM	NM	NM	NM	NM	NM
ERT-34	NM	NM	NM	NM	NM	NM	NM	NM
FLTG-1	3.6	NM	NM	NM	NM	NM	NM	NM
FLTG-2	NM	NM	NM	NM	NM	NM	NM	NM
FLTG-3	NM	NM	NM	NM	NM	NM	NM	NM
FLTG-4	NM	NM	NM	NM	NM	NM	NM	NM
FLTG-5	3.0	NM	NM	NM	NM	NM	NM	NM
FLTG-6	NM	NM	NM	NM	NM	NM	NM	NM
FLTG-7	2.0	0.4	0.2	0.3	0.2	0.3	0.6	0.2
FLTG-8	2.5	0.4	NM	NM	NM	NM	NM	NM
FLTG-9	NM	15+	NM	NM	NM	NM	NM	NM
FLTG-10	3.2	1.2	NM	NM	NM	NM	NM	NM
FLTG-11	NM	NM	NM	NM	NM	NM	NM	NM
FLTG-12	NM	NM	NM	NM	NM	NM	NM	NM
FLTG-13	2.6	1.3	NM	NM	NM	NM	NM	NM
FLTG-14	2.4	0.2	NM	NM	NM	NM	NM	NM
FLTG-15	2.4	NM	NM	NM	NM	NM	NM	NM
INT-59-P1	NM	1.2	NM	NM	NM	NM	NM	NM
INT-59-P4	NM	0.6	NM	NM	NM	NM	NM	NM
INT-60-P1	NM	0.2	NM	NM	NM	NM	NM	NM
INT-60-P4	NM	0.5	NM	NM	NM	NM	NM	NM
INT-101	2.6	0.3	0.2	0.3	0.3	1.0	1.3	0.2
INT-102	15+	15+	14.9	15+	15+	6.9	12.8	15+
INT-103	1.3	0.2	NM	NM	NM	NM	NM	NM
INT-104	4.6	3.2	NM	NM	NM	NM	4.0	3.0
INT-105	4.6	0.4	NM	NM	NM	NM	NM	NM

TABLE 4-10 (Continued)

Dissolved Oxygen at Monitoring Wells

	12/15/94	2/7/95	3/25/95	4/9/95	5/4/95	6/11/95	7/27/95	8/23/95
INT-106	15.0	4.7	NM	NM	NM	NM	0.8	NM
INT-107	15.0	15+	NM	NM	NM	NM	NM	NM
INT-108	2.1	1.7	0.2	0.3	1.5	0.2	1.0	0.6
INT-109	2.2	0.2	NM	NM	NM	NM	NM	NM
INT-110	0.8	0.4	NM	NM	NM	NM	2.3	NM
INT-111	2.8	1.4	NM	NM	NM	NM	2.7	0.2
INT-112	15.0	15+	15+	15+	15+	15+	15+	15+
INT-113	10.3	2.0	NM	NM	NM	NM	NM	NM
INT-114	1.5	0.2	NM	NM	NM	NM	3.4	3.4
INT-115	4.6	0.7	NM	NM	NM	NM	2.8	0.4
INT-116	2.4	NM	NM	NM	NM	NM	NM	NM
INT-117	3.1	NM	NM	NM	NM	NM	NM	NM
INT-118	2.0	NM	NM	NM	NM	NM	NM	NM
INT-119	1.1	0.3	NM	NM	NM	NM	0.4	0.2
INT-132	3.6	0.7	NM	NM	NM	NM	4.0	NM
INT-133	1.9	0.6	NM	NM	NM	NM	2.2	NM
INT-134	1.8	0.6	NM	NM	NM	NM	1.8	NM
INT-135	6.8	0.7	0.2	0.4	0.2	1.9	1.3	NM
INT-137	3.1	2.4	NM	NM	NM	NM	2.8	NM
INT-138	2.3	0.6	NM	NM	NM	NM	0.8	NM
INT-139	1.1	0.5	NM	NM	NM	NM	NM	NM
P-5	0.6	0.2	NM	NM	NM	NM	NM	NM
P-6	NM	NM	NM	NM	NM	NM	NM	NM
REI-10-2	1.1	0.2	NM	NM	NM	NM	0.3	0.1
REI-10-3	0.8	0.3	NM	NM	NM	NM	0.2	0.2
REI-12-2	2.4	NM	NM	NM	NM	NM	NM	NM
S1-101	0.8	0.2	NM	NM	NM	NM	NM	NM
S1-102	0.5	0.2	0.3	0.2	0.3	0.3	0.6	0.3
S1-103	1.2	0.2	NM	NM	NM	NM	NM	NM
S1-104	3.9	15+	NM	NM	NM	NM	4.8	0.6
S1-105	1.4	6.8	NM	NM	NM	NM	14.0	NM
S1-106	0.6	0.1	0.2	0.5	0.3	0.3	0.3	0.2
S1-107	15.0	15+	NM	NM	NM	NM	11.0	15+
S1-108	15.0	15+	NM	NM	NM	NM	NM	NM
S1-109	5.2	15+	NM	NM	NM	NM	11.2	1.0
S1-110	0.6	0.2	NM	NM	NM	NM	NM	NM
S1-111	15.0	15+	NM	NM	NM	NM	NM	NM
S1-112	2.4	0.2	NM	NM	NM	NM	NM	NM
S1-113	2.7	0.5	0.3	0.3	0.2	0.3	0.7	0.2

TABLE 4-10 (Continued)

Dissolved Oxygen at Monitoring Wells

	12/15/94	2/7/95	3/25/95	4/9/95	5/4/95	6/11/95	7/27/95	8/23/95
S1-114	1.5	0.4	NM	NM	NM	NM	0.2	0.2
S1-115	3.2	NM	NM	NM	NM	NM	NM	NM
S1-116	2.1	NM	NM	NM	NM	NM	NM	NM
S1-117	2.9	NM	NM	NM	NM	NM	NM	NM
S1-118	3.4	NM	NM	NM	NM	NM	NM	NM
S1-135	0.8	NM	NM	NM	NM	NM	NM	NM
S1-137	1.0	NM	NM	NM	NM	NM	NM	NM
S1-50-P1	NM	NM	NM	NM	NM	NM	NM	NM
S1-50-P3	NM	1.6	NM	NM	NM	NM	NM	NM
S1-51-P1	NM	NM	NM	NM	NM	NM	NM	NM
S1-51-P3	NM	0.3	NM	NM	NM	NM	NM	NM
S2-101	3.8	NM	NM	NM	NM	NM	NM	NM
SG-1	NM	NM	NM	NM	NM	NM	NM	NM
SG-2	NM	NM	NM	NM	NM	NM	NM	NM
SG-3	NM	NM	NM	NM	NM	NM	NM	NM
SG-4	NM	NM	NM	NM	NM	NM	NM	NM
SG-5	NM	NM	NM	NM	NM	NM	NM	NM
W-3	1.8	0.2	NM	NM	NM	NM	NM	NM
W-4	NM	NM	NM	NM	NM	NM	NM	NM
W-5	NM	NM	NM	NM	NM	NM	NM	NM
W-7	2.6	NM	NM	NM	NM	NM	NM	NM

ATTACHMENT 4A

Well Close-Out/Plug and Abandon Program

Well Close-Out/Plug and Abandon Program

Well Close-Out

Wells available for closure have had months of analytical data confirming that there is no further need to keep them semi-active on the project. All the S1 wells south of Gulf Pump Road have been inactive for at least 8 months, and these wells will be the first closures of the program.

Procedure: Close-Out

1. Electrical contractor to isolate circuit and check each well to confirm no back feed to controllers.

2. Pumps, probes, and manifolds pulled and inspected for usable material. (Discharge hose and piping disposed of in contaminated trash.)

3. Electrical controller and usable conduit are pulled and salvaged.

4. Flow lines and abandoned air lines are excavated and disposed of as contaminated trash. (Laterals that connect to an active line will be terminated with a fusible HDPE cap at the flow line.)

5. Water depths and bottom soundings are taken on each well. Bottom soundings are compared to the well completion log to determine the amount of solids in the well.

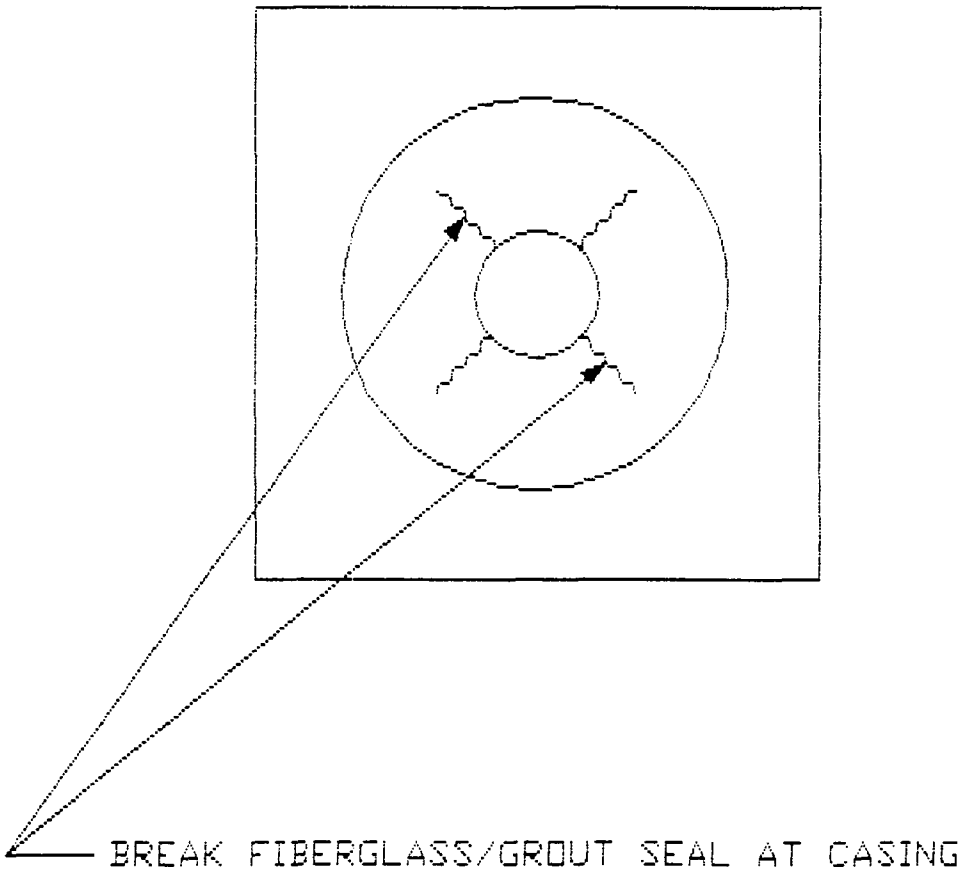
6. Figure 1 and 2 describe actual pad and vault demobilization.

7. Before capping off, awaiting sufficient number of wells to warrant plugging, well treatment of the S1 wells with a dosage of 2.3 mg/L of 50% H_2O_2 and .3 mg/L of KNO_3 may assist in short-term remediation since no further pumping and injection is scheduled for this section. Treatment of close-out INT wells will be based on each location.

   Prior to treatment, one well volume is pumped per Figure 3 to allow solids to settle before returning water to casing. Solids are disposed of in Cell D.

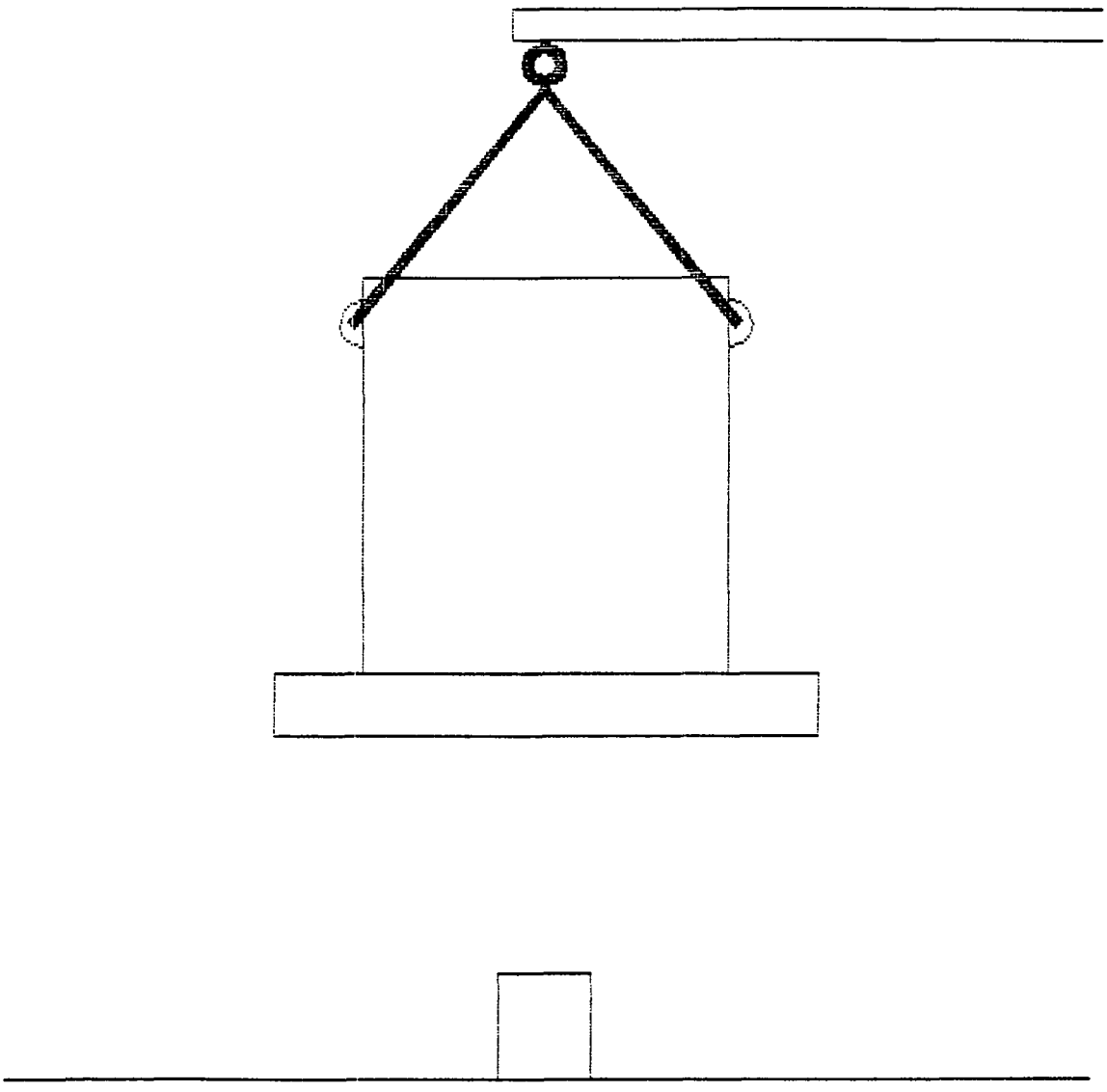
CLOSE OUT S1 and INT WELLS

FIGURE 1
VAULT PREPARATION



CLOSE OUT S1 and INT WELLS

FIGURE 2
VAULT REMOVAL

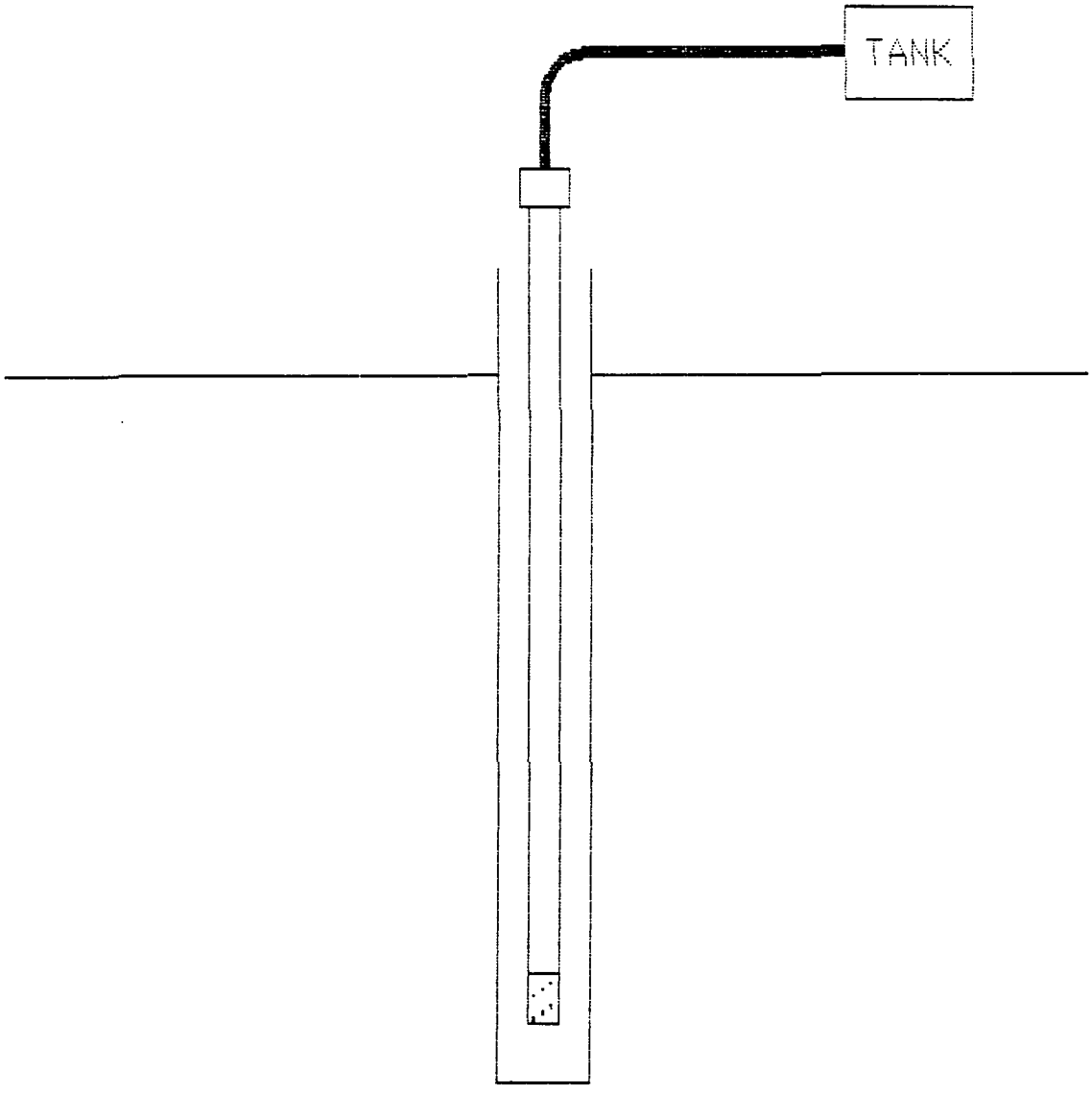


LIFT VAULT and PAD FROM CASING

CLOSE OUT S1 and INT WELLS

FIGURE 3
WELL TREATMENT

PUMP WELL VOLUME FROM BOTTOM OF CASING TO TANK



BATCH TREAT WITH H_2O_2 AND KNO_3
AND RETURN WTER TO CASING AND CAP OFF

Procedure: Plug and Abandon

1. Figure 1 shows preparation of well. This represents the removable casing.

2. According to Section 338.50 of the TNRCC Water Well Drillers Rules Manual, concrete or Bentonite can be used to plug a well that penetrates undesirable water zones.

3. Figure 2 shows the desirable method of plugging using Portland cement.

4. If Bentonite is used for plugging, the plugging ends at least 10 feet from the surface, using the same technique, and cement is used for completion to the surface. See Figure 3.

5. Figure 4 represents casing preparation on wells that have a steel surface casing. Plugging procedures are the same as above. If there is a void in the annulus, this space will be grouted also.

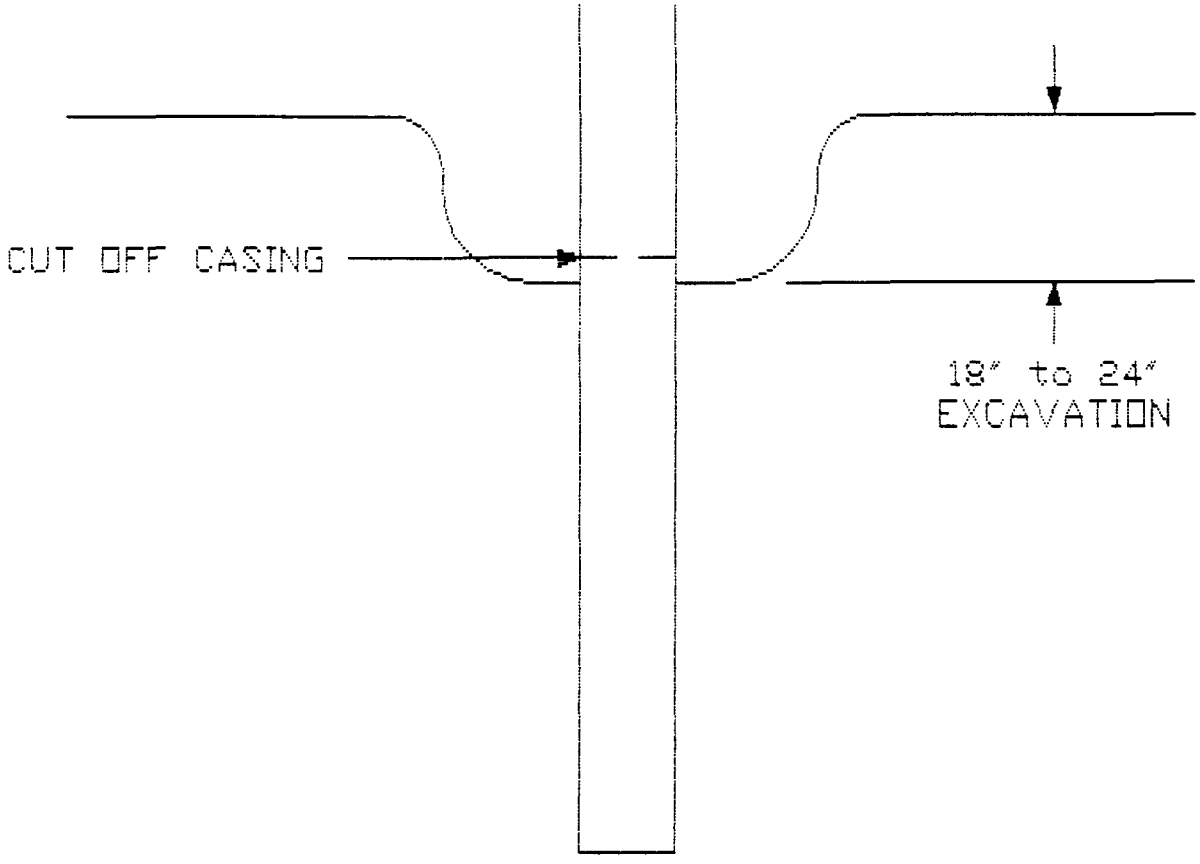
6. The plugging report will be filled out and signed by the operator that conducted the actual plugging. All but the current plugging data will be pre-printed. See attached example. Site coordinates are located in the Well Construction/Survey Data Manual in the operation office.

7. Return well site to natural grade (barricade if left open overnight).

MC/ks

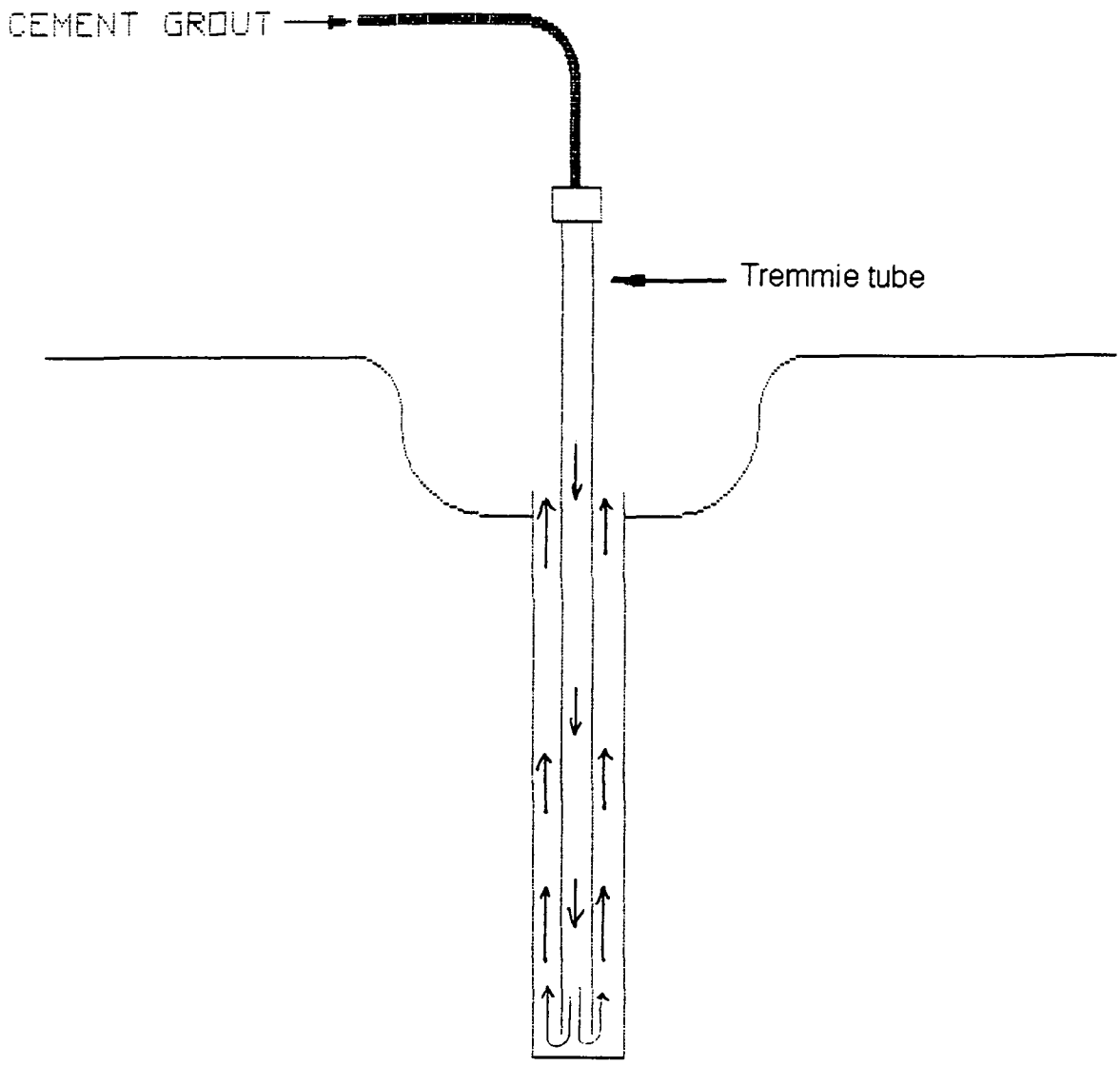
PLUG AND ABANDON S1 and INT WELLS

FIGURE 1
PREPARATION (NO SURFACE CASING)



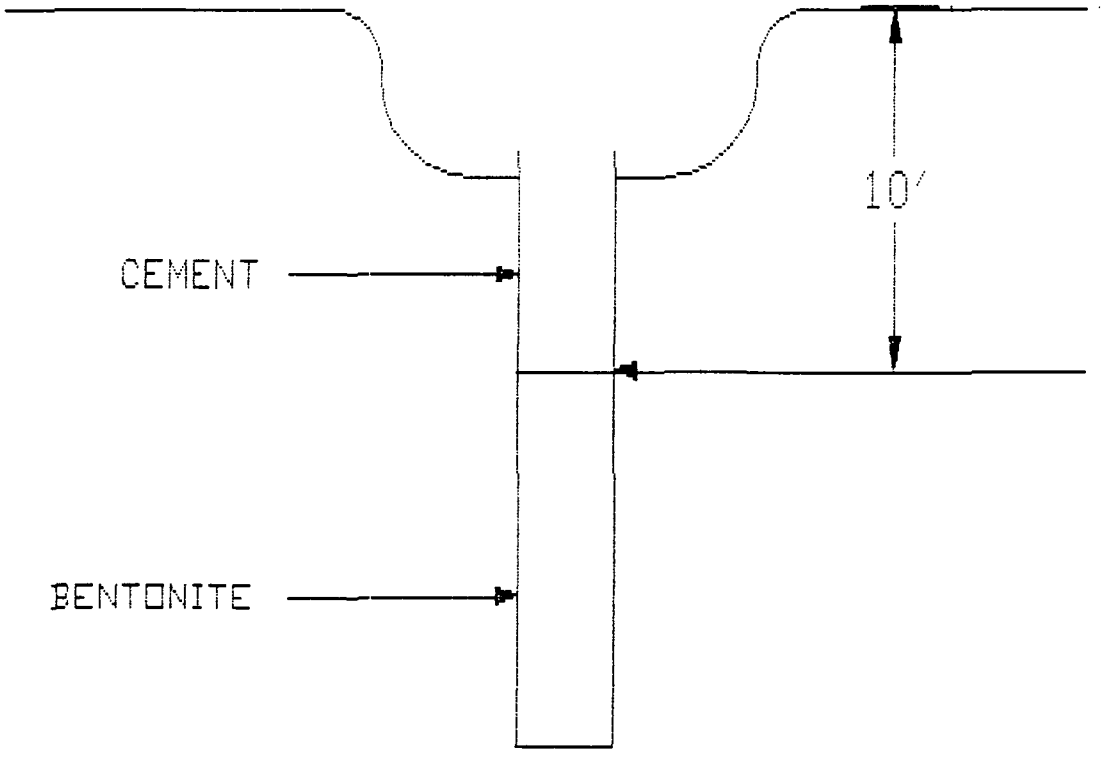
PLUG AND ABANDON S1 and INT WELLS

FIGURE 2
CEMENT GROUT (NO SURFACE CASING)



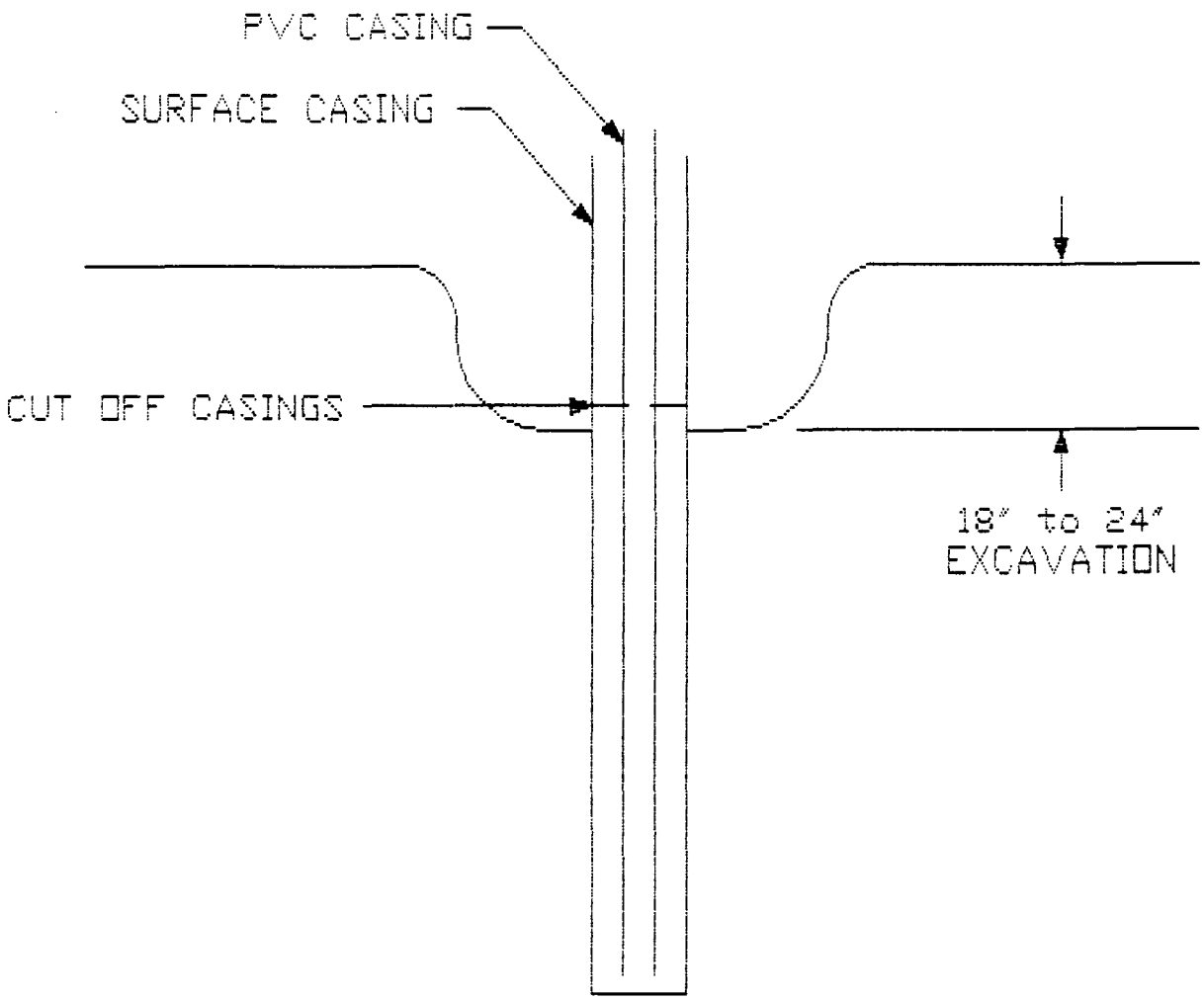
PLUG AND ABANDON S1 and INT WELLS

FIGURE 3
BENTONITE GROUT



PLUG AND ABANDON S1 and INT WELLS

FIGURE 4
PREPARATION (WITH SURFACE CASING)



* GROUTING SAME AS FIGURES 2 & 3

Please use black ink.

File WHITE COPY with:
TNRCC
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

State of Texas
PLUGGING REPORT

(This form must be completed and filed with the TNRCC within 30 days following the date the well is plugged as required by current statutory law.)

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

A. WELL IDENTIFICATION AND LOCATION DATA

1) OWNER FLTG, Inc. (Name) ADDRESS 15010 FM 2100, Ste 200, Crosby (Street or RFD) (City) TX (State) 77532 (Zip)

2) ADDRESS OF WELL:
County Harris 1025 Gulf Pump Rd. (Street, RFD or other) Crosby (City) TX (State) 77532 (Zip) GRID # state coordinates

3) OWNER'S WELL NO: S1-43

4) WELL TYPE (Check): ☐ Water ☐ Monitor ☐ Injection ☒ De-watering

5) x 3,212,350.706
y 13,888,085.572
N

Driller, Pump Installer, or Landowner performing the plugging operations must locate and identify the location of the well within a specific grid on a full scale-gridded County map available from the TNRCC/Installers Certification Program. The location of the well should be denoted within the grid by placing a corresponding dot in the grid to the right. The legal description section below is optional.

☐ LEGAL DESCRIPTION:

Section No. 1 Block No. 2 Township Crosby

Abstract No. NA Survey Name White Survey

Distance and direction from two intersecting section lines or survey lines: 1,500 ft.

B. HISTORICAL DATA ON WELL TO BE PLUGGED (If available)

6) Driller Layne Environmental License No. NA City Houston

7) Drilled 9/18 19 91; 8) Diameter of hole 6 inches; 9) Total depth of well 30 feet.

C. CURRENT PLUGGING DATA

10) Date well plugged 8/28 ,19 95.

11) Sketch of well: Using space at right, show method of plugging the well including all casing and cemented intervals.

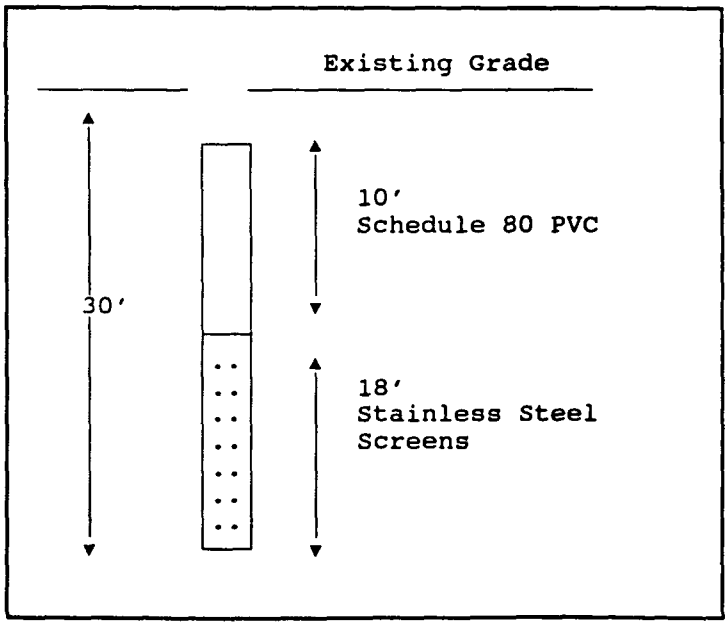
Name of Driller/Pump Installer actually performing the plugging operations
Mark Collins

License number NA

13) Casing and cementing data relative to the plugging operations:

DIAMETER (inches)	CASING LEFT IN WELL	
	FROM (feet)	TO (feet)
6	28	0

CEMENT PLUG(S) PLACED IN WELL		SACK(S) OF CEMENT USED
FROM (feet)	TO (feet)	
30	2	4



D. VALIDATION OF INFORMATION INCLUDED IN FORM

I hereby certify that this well was plugged by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 13 will result in the report(s) being returned for completion and resubmittal.

Company or Individual's Name *(type or print)* FLTG, Inc.

Address: Street or RFD 15010 FM 2100, Ste 200 City Crosby State TX Zip 77532

Signatures:

Licensed Driller/Pump Installer — Date — Owner of Well — Date

Trainee/Apprentice — Date

White - TNRCC Yellow - Well Owner Pink - Licensed Well Driller/Pump Installer

5.0 GROUNDWATER TREATMENT PLANT

5.1 Summary of Activities

As reported last month, R-2 bioreactor was taken out of service to conduct a BOD, COD, and TOC reduction test. These tests are continuing into September.

The data showing the latest results are in Table 5-3, and a complete evaluation will be included in the September monthly report.

To compensate for the reduced detention time in the reactors, the blending valve has been manually closed to 65% to insure quality effluent to the San Jacinto River.

As shown in the flows below, 0.2 million gallons were processed through the carbon filters in August.

There have been no excursion in the discharge standards for this reporting period.

One repair in the Groundwater Treatment Plant to report was that a blower motor was removed and sent in to be rewound and balanced.

There have been no other major repairs to report for August.

Total flows for August, 1995:

Water discharged to the San Jacinto River - 3,652,700 gallons

Water discharged to the Lagoon - 0

Sludge discharged to the Lagoon - 25,200 gallons

Water processed through the GWT - 3,643,300 metered gallons

Water discharged to the South Pond - 0

Water blended passed Carbon Filter - 3,403,700 gallons

Water treated through Carbon Filter - 198,400 gallons

Water processed from Cell D to GWT plant: metered - 0

Cell D injection at S1-1 through S1-9: metered - 135,300 gallons

5.2 Inoculum/Nutrient Addition

The following have been introduced into the bioreactors/clarifier:

Nutrients:
560 gallons Diammonium Phosphate

Microbes:
16 oz. French Limited Isolated Microbes

Coagulant:
~ 6.0 gallons Percol 778 Cationic Polymer

5.3 Maintenance

Table 5-1 lists the preventive maintenance items performed in August.

5.4 Operating Data

Table 5-2 summarizes the laboratory analysis of the treated water discharged to the San Jacinto River.

TABLE 5-1

Preventive Maintenance

Day	Action
August 4	Safety inspection of all electrical tools and extension cords completed.
August 7	Lubed sludge pump at clarifier.
August 9	Lubed all pumps and motors in GWT.
August 10	Lubed booster pumps and sump pump in chemical storage.
August 11	Lubed blowers 2 and 3.
August 22	Replaced filters in blowers 2 and 3.
August 23	Lubed all gate rollers and adjusted. Lubed all "red" valves. Sprayed hose connectors in GWT. Lubed sludge pump at clarifier.
August 24	Lubed locks at all gates.
August 25	Lubed and rotated SALA pumps. Replaced filters in central filter.
August 28	Lubed Blower #1

TABLE 5-2
Treated Water Results Summary

Collected	Set No.	pH (6-9)		TSS 5 PPM		TOC 55 PPM		O&G 15 PPM		Benzene 150 PPB		Chlor HC's 500 PPB		Total PCBs 0.65 PPB		Napthalene 300 PPB	
		Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg
2-Mar-95	M03A0313	7.47		.5		8.5		2.5		2.5		145.		.16		5.	
6-Mar-95	M03A0314	7.49		1.		8.1		2.5		2.5		128.		.16		5.	
9-Mar-95	M03A0315	7.38		1.		8.		2.5		2.5		193.		.16		5.	
13-Mar-95	M03A0316	7.64		5.		7.2		2.5		2.5		111.		.16		5.	
16-Mar-95	M03A0317	7.55		.5		6.		2.5		2.5		150.		.16		5.	
20-Mar-95	M03A0318	7.41		.5		6.6		2.5		2.5		97.		.16		5.	
23-Mar-95	M03A0319	7.45		1.		6.		2.5		2.5		185.		.16		5.	
27-Mar-95	M03A0320	7.83		3.		12.2		2.5		6.		325.		.16		5.	
30-Mar-95	M03A0321	7.47	7.5	7.	2.2	11.9	8.3	2.5	2.5	6.	3.3	342.	186	.16	.16	5.	5.
3-Apr-95	M03A0322	7.42	7.5	1.	2.2	11.7	8.6	2.5	2.5	6.	3.7	269.	200	.16	.16	5.	5.
6-Apr-95	M03A0323	7.45	7.5	2.	2.3	12.2	9.1	2.5	2.5	6.	4.1	239.	212	.16	.16	5.	5.
10-Apr-95	M03A0324	7.38	7.5	2.	2.4	11.1	9.4	2.5	2.5	6.	4.4	230.	216	.16	.16	5.	5.
13-Apr-95	M03A0325	7.62	7.5	3.	2.2	12.9	10.1	2.5	2.5	6.	4.8	364.	245	.16	.16	5.	5.
17-Apr-95	M03A0326	7.59	7.5	11.	3.4	12.9	10.8	2.5	2.5	6.	5.2	247.	255	.16	.16	5.	5.
20-Apr-95	M03A0327	7.75	7.6	1.	3.4	12.1	11.4	2.5	2.5	6.	5.6	226.	270	.16	.16	5.	5.
24-Apr-95	M03A0328	7.67	7.6	13.	4.8	13.	12.2	2.5	2.5	6.	6.	269.	279.	.16	.16	5.	5.
27-Apr-95	M03A0329	7.51	7.5	1.	4.6	12.2	12.2	2.5	2.5	2.5	5.6	236.	269	.16	.16	5.	5.
1-May-95	M03A0330	7.63	7.6	1.	3.9	12.1	12.2	2.5	2.5	2.5	5.2	177.	251	.16	.16	5.	5.
4-May-95	M03A0331	7.91	7.6	4.	4.2	12.5	12.3	2.5	2.5	2.5	4.8	222.	246	.16	.16	5.	5.
8-May-95	M03A0332	7.95	7.7	4.	4.4	11.3	12.2	2.5	2.5	2.5	4.4	228.	244	.16	.16	5.	5.
11-May-95	M03A0334	7.97	7.7	4.	4.7	10.9	12.21	2.5	2.5	2.5	4.1	235.	245	.16	.16	5.	5.
15-May-95	M03A0333	7.87	7.8	8.	5.2	13.7	12.3	2.5	2.5	2.5	3.7	209.	228	.16	.16	5.	5.
18-May-95	M03A0335	7.73	7.8	6.	4.7	11.	12.1	2.5	2.5	6.	3.7	374.	242	.16	.16	5.	5.
22-May-95	M03A0336	7.88	7.8	1.	4.7	31.	14.2	2.5	2.5	6.	3.7	274.	247	.16	.16	5.	5.
29-May-95	M03A0337	7.76	7.8	1.	3.3	45.	17.7	2.5	2.5	6.	3.7	227.	242	.16	.16	5.	5.
5-Jun-95	M03A0338	7.53	7.8	.5	3.3	12.1	17.7	2.5	2.5	2.5	3.7	189.	237	.16	.16	5.	5.
12-Jun-95	M03A0339	7.78	7.8	1.	3.3	45.8	21.5	2.5	2.5	2.5	3.7	188.	238	.16	.16	5.	5.
19-Jun-95	M03A0440	7.68	7.8	5.	3.4	7.	20.9	2.5	2.5	2.5	3.7	144.	230	.16	.16	5.	5.
26-Jun-95	M03A0441	7.71	7.8	1.	3.1	9.1	20.6	2.5	2.5	2.5	3.7	128.	219	.16	.16	5.	5.
2-Jul-95	M03A0442	7.47	7.7	.5	2.7	6.7	20.2	2.5	2.5	2.5	3.7	180.	213	.16	.16	5.	5.
10-Jul-95	M03A0343	7.76	7.7	5.	2.3	5.2	19.2	2.5	2.5	2.5	3.7	182.	210	.16	.16	5.	5.
17-Jul-95	M03A0344	7.75	7.7	3.	2.	7.6	18.8	2.5	2.5	2.5	3.3	181.	188	.16	.16	5.	5.
24-Jul-95	M03A0345	7.55	7.7	.5	1.9	8.2	16.3	2.5	2.5	5.	3.2	479.	211	.16	.16	5.	5.
31-Jul-95	M03A0346	7.64	7.7	.5	1.9	2.5	11.6	7.8	3.1	5.	3.1	380.	228	.16	.16	5.	5.
7-Aug-95	M03A0347	7.55	7.7	2.	2.1	6.4	10.9	2.5	3.1	5.	3.3	536.	266	.16	.16	5.	5.
14-Aug-95	M03A0348	7.6	7.6	2.	2.2	7.3	6.7	2.5	3.1	5.	3.6	289.	278	.16	.16	5.	5.
21-Aug-95	M03A0349	7.55	7.6	1.	1.7	7.6	6.7	2.5	3.1	5.	3.9	261.	291	.16	.16	5.	5.
28-Aug-95	M03A0350	7.67	7.6	1.	1.7	8.7	6.7	2.5	3.1	5.	4.2	223.	301	.16	.2	5.	5.

Chlorinated hydrocarbons value is the sum of detected concentrations of 21 volatile chlorinated hydrocarbons on target compound list.

TABLE 5-2 (Continued)
Treated Water Results Summary

Collected	Set No.	As 150 PPB		Ba 1000 PPB		Cd 50 PPB		Cr 500 PPB		Cu 15 PPB		Pb 66 PPB		Mn 300 PPB		Hg 1 PPB		Ni 148 PPB		Se 20 PPB		Ag 5 PPB		Zn 162 PPB	
		Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg
2-Mar-95	M03A0313	23.		133.		.1		2.		1.		.5		15.		.1		8.		1.3		.5		6.	
6-Mar-95	M03A0314	17.		130.		1.		1.		3.		2.2		3.		.1		2.5		.5		.8		8.	
9-Mar-95	M03A0315	24.		111.		.1		.2		.8		.5		4.		.1		4.		1.3		.2		6.	
13-Mar-95	M03A0316	17.		121.		.1		.2		1.		.5		41.		.1		3.		1.3		.2		5.	
16-Mar-95	M03A0317	23.		114.		.1		.3		3.		.5		2.		.1		3.		1.3		.2		11.	
20-Mar-95	M03A0318	18.		112.		.1		.2		3.		.5		2.		.1		2.		1.3		.2		3.	
23-Mar-95	M03A0319	19.		119.		.1		.2		2.		.5		2.		.1		3.		1.3		.2		4.	
27-Mar-95	M03A0320	14.		130.		.1		3.		2.		.5		22.		.1		5.		1.3		.2		40.	
30-Mar-95	M03A0321	19.	19.3	132.	122	.1	.2	2.	1.	2.	2.	.5	.7	25.	12.9	.1	.1	6.	4.1	1.3	1.2	.2	.3	8.	10.1
3-Apr-95	M03A0322	17.	18.7	127.	122	.1	.2	.2	.8	2.	2.1	.5	.7	9.	12.2	.1	.1	1.	3.3	1.3	1.2	.2	.2	15.	11.1
6-Apr-95	M03A0323	23.	19.3	102.	119	.1	.1	.2	.7	1.	1.9	.5	.5	4.	12.3	.1	.1	1.	3.1	1.3	1.3	.2	.2	4.	10.7
10-Apr-95	M03A0324	12.	18.	157.	124	.1	.1	2.	.9	2.	2.	2.	.7	32.	15.4	.1	.1	4.	3.1	1.3	1.3	.2	.2	8.	10.9
13-Apr-95	M03A0325	44.	21.	107.	122	.1	.1	1.	1.	2.	2.1	.5	.7	11.	12.1	.1	.1	6.	3.4	1.3	1.3	.2	.2	3.	10.7
17-Apr-95	M03A0326	26.	21.3	171.	129	.1	.1	14.	2.5	2.	2.	1.	.7	108.	23.9	.1	.1	14.	4.7	1.3	1.3	.2	.2	17.	11.3
20-Apr-95	M03A0327	24.	22.	129.	130	.7	.2	7.	3.3	9.	2.7	2.	.9	43.	28.4	.1	.1	10.	5.6	1.3	1.3	.2	.2	34.	14.8
24-Apr-95	M03A0328	21.	22	115.	130.	.1	.2	7.	4.	1.	2.6	.5	.9	38.	32.4	.1	.1	6.	5.9	1.3	1.3	.2	.2	4.	14.8
27-Apr-95	M03A0329	24.	23.3	110.	128	.1	.2	2.	3.9	2.	2.6	.5	.9	12.	31.3	.1	.1	7.	6.1	1.3	1.3	.2	.2	9.	11.3
1-May-95	M03A0330	16.8	23.1	106.	125	1.1	.3	.7	3.8	.7	2.4	.5	.9	6.8	29.3	.1	.1	8.5	6.4	.8	1.2	.5	.2	.2	10.5
4-May-95	M03A0331	21.	23.5	149.	127	1.1	.4	5.9	4.4	1.	2.3	.5	.9	70.4	36.1	.1	.1	7.6	7.1	.8	1.2	.5	.2	16.2	10.6
8-May-95	M03A0332	16.	22.8	126.	130.	.1	.4	1.	4.5	1.6	2.4	.5	.9	6.	36.4	.1	.1	5.	7.6	1.3	1.2	.2	.2	4.	10.6
11-May-95	M03A0334	17.	23.3	158.	130	.1	.4	3.	4.6	.9	2.2	.5	.7	22.	35.2	.1	.1	6.	7.8	1.3	1.2	.2	.2	5.	10.3
15-May-95	M03A0333	17.	20.3	141.	134	.1	.4	2.	4.7	1.	2.1	.5	.7	21.	36.4	.1	.1	5.	7.7	1.3	1.2	.2	.2	4.	10.4
18-May-95	M03A0335	18.	19.4	122.	128	.1	.4	.2	3.2	.3	1.9	.5	.7	4.	24.8	.1	.1	3.	6.5	1.3	1.2	.2	.2	1.5	8.7
22-May-95	M03A0336	14.	18.3	130.	129	.1	.3	1.	2.5	.5	1.	.5	.5	9.	21.	.1	.1	5.	5.9	1.3	1.2	.2	.2	7.	5.7
29-May-95	M03A0337	16.	17.8	176.	135	.1	.3	2.	2.	.3	.9	.5	.5	27.	19.8	.1	.1	1.	5.3	2.8	1.3	.2	.2	4.	5.7
5-Jun-95	M03A0338	12.	16.4	191.	144	.1	.3	2.	2.	1.	.8	.5	.5	18.	20.5	.1	.1	4.	5.	1.3	1.3	.2	.2	5.	5.2
12-Jun-95	M03A0339	13.	16.	204.	155	.1	.2	1.	2.	1.	.8	.5	.5	2.5	20.	.1	.1	4.5	4.6	1.3	1.4	.2	.2	3.	5.5
19-Jun-95	M03A0340	14.	15.2	213.	162	.1	.1	1.	1.5	.8	.8	.5	.5	6.	12.8	.1	.1	5.	4.3	1.3	1.4	.2	.2	1.5	3.9
26-Jun-95	M03A0341	15.	15.1	155.	166	.1	.1	.7	1.4	.7	.7	4.	.9	2.	12.4	.1	.1	4.	4.2	1.3	1.4	.2	.2	6.	4.1
2-Jul-95	M03A0342	17.	15.1	122.	162	.1	.1	1.5	1.3	.5	.7	1.	.9	10.	11.1	.1	.1	5.	4.1	1.5	1.4	.2	.2	6.	4.2
10-Jul-95	M03A0343	13.	14.7	173.	165	.2	.1	.7	1.1	.9	.7	.5	.9	2.	8.9	.1	.1	5.	4.1	1.2	1.4	.2	.2	5.	4.3
17-Jul-95	M03A0344	13.	14.1	172.	171	.1	.1	.9	1.2	1.	.7	.5	.9	2.5	8.8	.1	.1	4.8	4.3	1.2	1.4	.2	.2	2.9	4.5
24-Jul-95	M03A0345	18.	14.6	175.	176	.1	.1	.7	1.2	.9	.8	.5	.9	1.3	7.9	.1	.1	6.6	4.4	1.2	1.4	.2	.2	5.5	4.3
31-Jul-95	M03A0346	12.	14.1	193.	178	.1	.1	.9	1.	.9	.8	2.8	1.2	5.2	5.5	.1	.1	4.6	4.8	1.1	1.2	.2	.2	3.7	4.3
7-Aug-95	M03A0347	17.	14.7	204.	179.	1.	.2	1.5	1.	.9	.8	.5	1.2	6.6	4.2	.1	.1	5.1	5.	1.2	1.2	.2	.2	7.8	4.6
14-Aug-95	M03A0348	15.	14.9	202.	179	.1	.2	.2	.9	.9	.8	.5	1.2	5.3	4.5	.1	.1	2.8	4.8	1.2	1.2	.2	.2	6.8	5.
21-Aug-95	M03A0349	13.	14.8	190.	176	.1	.2	.2	.8	.9	.8	.5	1.2	1.3	4.	.1	.1	4.	4.7	1.2	1.2	.2	.2	.5	4.9
28-Aug-95	M03A0350	12.	14.4	204.	182	.1	.2	.9	.8	.9	.8	.5	.8	4.4	4.3	.1	.1	3.7	4.6	1.2	1.2	.2	.2	3.3	4.6

Metals values in PPB

TABLE 5-3

The following Data is from the R-2 Bio-Test samples collected on 07/29/95, 08/07/95, and 08/21/95.

Compound	Concent. 07/29/95	Concent. 08/07/95	Concent. 08/21/95	Reduction %	Molecular Weight
Acetone	440			100	58
Vinyl chloride	64	6		100	62
Chloroethane	24			100	64
Methylene chloride	218	13		100	86
4-Methyl-2-pentanone	26			100	86
Toluene	16			100	92
1,1-Dichloroethene	6			100	96
1,2-Dichloroethene (total)	340	120	33	90	96
1,1-Dichloroethane	67	26	14	79	98
1,2-Dichloroethane	1096	440	8	99	98
Ethylbenzene	11			100	106
cis-1,3-Dichloropropene	52			100	110
Chloroform	1936	540	73	96	119
Xylene (total)	19	2		100	120
Trichloroethene	100	23	11	89	130
Carbon tetrachloride	110			100	152
Tetrachloroethene	103	13	6	94	164
1,1,2,2-Tetrachloroethane	4			100	166

BOD	21	11	0	100
COD	141	56	51	64
TOC	28	21	9.1	68
Dissolved Oxygen	8.6	2.2	0.8	91
NH_3-N	68	60	50	26
PO_4-P	24	21	18	25

6.0 AMBIENT AIR MANAGEMENT

Ambient air quality management continued on an "as-needed" basis to protect the environment, human health, and site workers.

6.1 Summary of Activities

Collected and analyzed three time-integrated personnel exposure samples; the measured levels of volatile organic compounds were well below the action levels.

Sampled the ambient air in all work areas several times per shift and on a random "spot-check" basis; there were no levels of volatile organic compounds which required response action. Sampled ambient air in special work areas where burning and/or welding was planned. Sampled ambient air continuously in areas where exposure could occur and where confined space work occurred.

6.2 Problems and Response Action

Problem	Response Action
Calibrate portable vapor meters.	Train operators to calibrate; refurbish all meters.
Sampling "hot" wells.	Require respirator use when sampling "hot" wells.
Ambient air quality in all work areas.	Check all work areas with portable meter several times per day.
H_2S levels in some well vaults.	Vent vault and purge with air before working in the vaults.

6.3 Problems Resolved

None.

6.4 On-going Events/Activities

Measure ambient air quality in all work areas several times per day.

Conduct periodic time-integrated sampling in all major work areas.

Require respiratory protection when sampling "hot" wells.

Conduct necessary air sampling and analyses to issue "burn" permits.

Closely monitor ambient air quality in the vicinity of new projects/activities.

Conduct respirator fit tests on all employees.

7.0 QUALITY ASSURANCE/QUALITY CONTROL

7.1 Summary of Activities

7.1.1 Sampling

One set of personal air monitoring samples were collected in August. The following is a summary of current routine and special air matrix code sample specifics:

MATRIX CODE	SAMPLE SPECIFICS
M01D	TF at three locations

TF = Tenax® front tube

Table 7-1 is a summary of the air, soil and water samples collected during the month of August.

7.1.2 Data Validation Activities Summary

7.1.2.1 Treated Water Samples

Data validation was completed for sample sets M03A0344, M03A0345, M03A0346, M03A0347, M03A0348 and M03A0349. These samples were collected between July 17, 1995 and August 21, 1995. QC failures are summarized in Table 7-2. Completeness values are summarized in Tables 7-3 through 7-7.

7.1.2.2 Groundwater Samples

Level I data validation was completed for the monthly groundwater monitoring sample sets collected in August. There were no significant analytical QC failures on these sample data.

7.1.2.3 Other Samples

All other special sample sets were validated manually this period. The monthly personnel air monitoring sample analytical data was not usable due to analytical QC failures. See section 7.2.2.1 for an explanation of these failures

7.2 Data Validation QC Summary and Discussion

7.2.1 Level I and Level II QC Philosophy

The Quality Assurance Project Plan (QAPP) defines data validity in terms of procedural requirements which must be followed for data comparability, and numerical data quality objectives which must be met to assure precision and accuracy of the results. Precision, accuracy and completeness are the numerical Data Quality Objectives (DQOs) established for the French Project by the QAPP. The intent of the data validation process is to verify that the documentation and quality control data provided by the laboratory properly substantiate the required data quality.

For purposes of data validation procedures, the QAPP defines two QC levels: Level I and Level II. Level I data validation is specified for process control and progress monitoring sample data validation and Level II data validation is specified for remediation verification sample results and treated water discharge sample results.

7.2.2 QA Issues

7.2.2.1 Personnel Air Monitoring QC Failures

The data from the personnel air monitoring samples (TO-1/Tenax) collected in August were unusable because of analytical QC failures. These failures are as follows :

- Three surrogates were outside QC limits on samples -01 and -02; two surrogates were outside QC limits on sample -03.
- All three internal standards were outside QC on samples -01,-02 and -03.

The lab has been notified that this is data is not acceptable. The lab indicated that matrix interference caused the QC failures. Since this is the first time that personnel monitoring samples have exhibited matrix interference, the sampling pumps have been examined and re-calibrated at a lower flow rate to reduce the possibility of excessive concentrations of compounds.

7.2.2.2 Matrix Interference on Groundwater Samples

Starting with the June monthly groundwater sampling event, extra volume was collected from every 10th well sampled for a set of MS/MSD samples. The samples and analytical data were treated as QC level II. This deviates from the normal routine of treating groundwater samples as level I. The extra data obtained is being used to provide a basis for determining the matrix spike/duplicate recovery limits utilized for remediation verification samples.

All analytical QC was within control limits with the exception of the following:

- Sample M04B005406 (REI-10-3) surrogate d4-1,2-DCE was outside QC limits. Sample was diluted and re-analyzed. Re-analysis surrogates were within QC limits. Matrix effect is indicated. Several compounds exceeded the calibration range on the undiluted analysis.

TABLE 7-1

Samples Collected - August, 1995

Sample No.	Description	Location	Date Samp'd	Lab Rec'd	Data Rec'd	Lab
M01D005901	Personal air monitoring	WTP Operator	8/09	8/10	Y	A
M01D005902	Personal air monitoring	Well Maint.	8/09	8/10	Y	A
M01D005903	Personal air monitoring	TOC Bldg.	8/09	8/10	Y	A
M03A034701	Treated water discharge	CF Out	8/07	8/09	Y	A
M03A034801	Treated water discharge	CF Out	8/14	8/16	Y	A
M03A034901	Treated water discharge	CF Out	8/21	8/23	Y	A
M03A035001	Treated water discharge	CF Out	8/28	8/30	N	A
M04B005301	Groundwater monitoring	S1-128	8/01	8/02	Y	A
M04B005302	Groundwater monitoring	S1-104	8/01	8/02	Y	A
M04B005303	Groundwater monitoring	S1-134	8/01	8/02	Y	A
M04B005304	Groundwater monitoring	S1-132	8/01	8/02	Y	A
M04B005305	Groundwater monitoring	S1-127	8/01	8/02	Y	A
M04B005306	Groundwater monitoring	INT-106	8/01	8/02	Y	A
M04B005307	Groundwater monitoring	INT-144	8/01	8/02	Y	A
M04B005308	Groundwater monitoring	INT-141	8/01	8/02	Y	A
M04B005309	Groundwater monitoring	S1-050-P-2	8/01	8/02	Y	A
M04B005310	Groundwater monitoring	S1-105	8/01	8/02	Y	A

Labs: A = American Analytical and Technical Services
N = North Water District Lab
K = Chester LabNet-Houston

TABLE 7-1

Samples Collected - August, 1995

Sample No.	Description	Location	Date Samp'd	Lab Rec'd	Data Rec'd	Lab
M04B005401	Groundwater monitoring	INT-110	8/02	8/03	Y	A
M04B005403	Groundwater monitoring	INT-123	8/02	8/03	Y	A
M04B005405	Groundwater monitoring	S1-120	8/02	8/03	Y	A
M04B005406	Groundwater monitoring	REI-10-3	8/02	8/03	Y	A
M04B005407	Groundwater monitoring	S1-123	8/02	8/03	Y	A
M04B005408	Groundwater monitoring	INT-108	8/02	8/03	Y	A
M04B005409	Groundwater monitoring	INT-114	8/02	8/03	Y	A
M04B005410	Groundwater monitoring	INT-112	8/02	8/03	Y	A
M04B005411	Groundwater monitoring	INT-111	8/02	8/03	Y	A
M04B005501	Groundwater monitoring	INT-109	8/03	8/04	Y	A
M04B005503	Groundwater monitoring	INT-104	8/03	8/04	Y	A
M04B005504	Groundwater monitoring	S1-022	8/03	8/04	Y	A
M04B005505	Groundwater monitoring	INT-127	8/03	8/04	Y	A
M04B005508	Groundwater monitoring	INT-005	8/03	8/04	Y	A
M04B005509	Groundwater monitoring	S1-063	8/03	8/04	Y	A
M04B005601	Groundwater monitoring	REI-10-2	8/04	8/05	Y	A
M04B005701	Groundwater monitoring	FLTG-007	8/30	8/31	N	A

Labs: A = American Analytical and Technical Services
N = North Water District Lab
K = Chester LabNet-Houston

TABLE 7-1

Samples Collected - August, 1995

Sample No.	Description	Location	Date Samp'd	Lab Rec'd	Data Rec'd	Lab
M04B005702	Groundwater monitoring	INT-104	8/30	8/31	N	A
M04B005703	Groundwater monitoring	INT-115	8/30	8/31	N	A
M04B005704	Groundwater monitoring	INT-119	8/30	8/31	N	A
M04B005705	Groundwater monitoring	S1-106	8/30	8/31	N	A
M04B005706	Groundwater monitoring	S1-107	8/30	8/31	N	A
M04B005707	Groundwater monitoring	S1-114	8/30	8/31	N	A
M04B005801	Groundwater monitoring	S1-109	8/31	9/01	N	A
M04B005802	Groundwater monitoring	ERT-022	8/31	9/01	N	A
M04B005803	Groundwater monitoring	S1-113	8/31	9/01	N	A
M04B005804	Groundwater monitoring	INT-111	8/31	9/01	N	A
M04B005805	Groundwater monitoring	INT-141	8/31	9/01	N	A
M04B005806	Groundwater monitoring	INT-231	8/31	9/01	N	A
M04B005807	Groundwater monitoring	INT-232	8/31	9/01	N	A
M04B005808	Groundwater monitoring	INT-233	8/31	9/01	N	A
M04B005809	Groundwater monitoring	INT-234	8/31	9/01	N	A
M04B005810	Groundwater monitoring	INT-003	8/31	9/01	N	A
M04B005901	Groundwater monitoring	INT-021	8/31	9/01	N	A
M04B005902	Groundwater monitoring	INT-055	8/31	9/01	N	A

Labs: A = American Analytical and Technical Services
N = North Water District Lab
K = Chester LabNet-Houston

TABLE 7-1

Samples Collected - August, 1995

Sample No.	Description	Location	Date Samp'd	Lab Rec'd	Data Rec'd	Lab
M04B005903	Groundwater monitoring	S1-063	8/31	9/01	N	A
M04B005904	Groundwater monitoring	INT-056	8/31	9/01	N	A
M04B005905	Groundwater monitoring	S1-062	8/31	9/01	N	A
M04B005906	Groundwater monitoring	S1-061	8/31	9/01	N	A
M04B005907	Groundwater monitoring	INT-005	8/31	9/01	N	A
M04B005908	Groundwater monitoring	S1-030	8/31	9/01	N	A
M04B005909	Groundwater monitoring	S1-032	8/31	9/01	N	A
M04B005910	Groundwater monitoring	S1-050-P-2	8/31	9/01	N	A
M06C003001	Process monitoring	T-101 Eff	8/02	8/03	Y	A
M06C003002	Process monitoring	T-101 Inf	8/02	8/03	Y	A
M06C003003	Process monitoring	R1	8/02	8/03	Y	A
M06C003004	Process monitoring	R2	8/02	8/03	Y	A
M06C003005	Process monitoring	Cell D Liqr	8/02	8/03	Y	A
S14E000701	GW modeling data	GW-014R	8/04	8/05	Y	A
S16E000701	GW modeling data	R2	8/07	8/09	Y	A
S16E000702	GW modeling data	R2	8/07	8/09	Y	A
S16E000703	GW modeling data	R2	8/07	8/09	Y	A
S16E000801	GW modeling data	R2	8/21	8/23	Y	A
S16E000802	GW modeling data	R2	8/21	8/23	Y	A
S16E000803	GW modeling data	R2	8/21	8/23	Y	A

Labs: A = American Analytical and Technical Services
N = North Water District Lab
K = Chester LabNet-Houston

TABLE 7-2

Treated Water QC Failure Summary

There were no QC failures for the treated water samples validated this month.

7.2.3 Completeness Summaries

Tables 7-3 through 7-3 summarize completeness values for VOA, SVA, PCBs, Metals and miscellaneous parameters on treated water samples.

VOA (Table 7-3)

A total of 6 VOA sample sets have been validated with all categories meeting Project Completeness Goals.

SVA (Table 7-4)

A total of 6 SVA sample sets have been validated for this time period. All categories meet or exceed Project Completeness Goals with the exception of sample matrix effect. This is due to matrix effect failures in the early stages of the project and the MS/MSD accuracy failures that occurred during September and October 1994.

PCBs (Table 7-5)

A total of 6 PCB sample sets have been validated for this time period with all samples, meeting data quality objectives. All categories meet or exceed Project Completeness Goals.

Metals (Table 7-6)

A total of 6 sample sets have been validated for this time period. Project Completeness Goals are met or exceeded in all categories.

Miscellaneous Parameters (Table 7-7)

A total of 6 sample sets have been validated for this time period. Project completeness goals are met or exceeded in all categories.

TABLE 7-3

Completeness Summary
M03A Treated Water
Volatile Organics Analyses

SAMPLE DATE SET NUMBER	M03A0344 thru M03A0349	Project to Date	PROJECT GOAL
Analysis Holding Time	100	100	100
12 Hour Window	100	100	100
SU Check	100	94	90
SU1 (d4-1,2-DCE)	100	97	90
SU2 (d8-Toluene)	100	98	90
SU3 (4-BFB)	100	99	90
IS Check	100	100	90
IS1 (BrClMethane)	100	100	90
IS2 (1,4-DiFlBenzene)	100	100	90
IS3(d5-ClBenzene)	100	100	90
Sample RT/RRT Check	100	*	
Vinyl Chloride			
Accuracy	100	99	90
Precision	100	99	90
Benzene			
Accuracy	100	99	90
Precision	100	100	90
No Group Matrix Effect	100	*	90
No Sample Matrix Effect	100	*	90
Tune Check	100	*	
Overall ICAL Check	100	*	
Overall CCAL Check	100	*	
Overall Lab Blank Check	100	*	

* - Level II QC checks were performed on 10% of samples prior to 6/14/93.
PTD completeness values do not apply to these checks.

TABLE 7-4

Completeness Summary
M03A Treated Water
Semivolatile Organic Analyses

SAMPLE DATE SET NUMBER	M03A0344 thru M03A0349	Project to Date	PROJECT GOAL
Extract Holding Time	100	100	100
Analysis Holding Time	100	100	100
12 Hour Window	100	100	100
SU Check	**100**	**95**	**90**
SU1 (2-FlPhenol)	100	95	90
SU2 (d5-Phenol)	100	94	90
SU3 (d5-Nitrobenz)	100	96	90
SU4(2-FlBiphenyl)	100	98	90
SU5(2,4,6-TBPh)	100	94	90
SU6(d14-Terphen)	75	94	90
IS Check	**100**	**98**	**90**
IS1 (d4-1,4-DiClBenz)	100	100	90
IS2 (d8-Naph)	100	100	90
IS3 (d10-Acenaph)	100	100	90
IS4 (d10-Phenanth)	100	100	90
IS5 (d12-Chrysene)	90	97	90
IS6 (d12-Perylene)	100	96	90
Sample RT/RRT	100	*	*
Napthalene			
Accuracy	100	96	90
Precision	100	99	90
No Group Matrix Effect	100	99	90
No Sample Matrix Effect	100	89	90
Tune Check	100	*	*
Overall ICAL Check	100	*	*
Overall CCAL Check	100	*	*
Overall Lab Blank Check	100	*	*

* - Level II QC checks were performed on 10% of samples prior to 6/14/93.
PTD completeness values do not apply to these checks.

TABLE 7-5

Completeness Summary
M03A Treated Water
PCB Analyses

SAMPLE DATE SET NUMBER	M03A0344 thru M03A0349	Project to Date	PROJECT GOAL
Extract Holding Time	100	100	100
Analysis Holding Time	100	100	100
12 Hour Window	100	100	100
SU Check - Column A	100	99	90
SU1 (DCBP)	100	88	NS
SU2 (TCMX)	100	97	NS
SU Check - Column B	100	98	90
SU1 (DCBP)	100	88	NS
SU2 (TCMX)	100	97	NS
SU Check - Column A or B	100	98	90
Aroclor 1242			
Accuracy	100	99	90
Precision	100	97	90
Overall ICAL Check	100	*	
Overall 1st CCAL Check	100	*	
Overall 2nd CCAL Check	100	*	
Overall Lab Blank Check	100	*	

* - Level II QC checks were performed on 10% of samples prior to 6/14/93. PTD completeness values do not apply to these checks.

TABLE 7-6

Completeness Summary
M03A Treated Water
Metals Analyses

SAMPLE DATE SET NUMBER	M03A0344 thru M03A0349	PROJECT GOAL
ANALYTE: BARIUM		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100
ANALYTE: CADMIUM		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100
ANALYTE: CHROMIUM		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100
ANALYTE: COPPER		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100
ANALYTE: LEAD		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

W - All samples waived due to low response

* Matrix interference is indicated by:
Furnace analyses - failure of analytical spike or low MSA coefficient
ICP analyses - failure of serial dilution

TABLE 7-6 (Continued)

Completeness Summary
M03A Treated Water
Metals Analyses

SAMPLE DATE SET NUMBER	M03A0344 thru M03A0349	PROJECT GOAL
ANALYTE: MANGANESE		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100
ANALYTE: NICKEL		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100
ANALYTE: SILVER		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100
ANALYTE: ZINC		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100
ANALYTE: MERCURY		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

W - All samples waived due to low response

* Matrix interference is indicated by:
Furnace analyses - failure of analytical spike or low MSA coefficient
ICP analyses - failure of serial dilution

TABLE 7-6 (Continued)

Completeness Summary
M03A Treated Water
Metals Analyses

SAMPLE DATE SET NUMBER	M03A0344 thru M03A0349	PROJECT GOAL
ANALYTE:ARSENIC		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100
ANALYTE: SELENIUM		
MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

W - All samples waived due to low response

* Matrix interference is indicated by:
Furnace analyses - failure of analytical spike or low MSA coefficient
ICP analyses - failure of serial dilution

TABLE 7-7

Completeness Summary
M03A Treated Water
Miscellaneous Parameters Analyses

SAMPLE DATE SET NUMBER	M03A0344 thru M03A0349	Project to Date	PROJECT GOAL
PARAMETER: TOC			
Analysis Hold Time	100	100	100
MS Accuracy	100	100	NA
DUP Precision	100	100	NA
PARAMETER: OILS			
Analysis Hold Time	100	100	100
MS Accuracy	100	100	NA
DUP Precision	100	100	NA
PARAMETER: TSS			
Analysis Hold Time	100	100	100
MS Accuracy	NA	NA	NA
DUP Precision	100	100	NA

8.0 SITE MAINTENANCE

8.1 Summary of Activities

8.1.1 General Housekeeping

The site safety and housekeeping inspections and responses kept grounds safe and attractive for employees and visitors.

8.1.2 Purchasing

All purchases were covered by written requisitions and purchase orders. Purchase of chemicals is now reduced to groundwater treatment and insitu remediation.

A competitive bid to drill and install 2 new injection wells was awarded to Core Terra Environmental Drilling.

8.1.3 Equipment Maintenance

Routine preventive and production maintenance was performed on all equipment.

8.2 Visitors

The following visitors were recorded at the site during August:

August 1:	Mark Graham, TWCC
August 2:	(b) (6), University of Rochester
August 3:	Burt Campbell, PMCI Scott Jordan, PMCI
August 7:	Bill Sterling, Crosby Bank

August 10:	Kay Peterson, Mayor, Day, Caldwell & Keeton Owen Joiner, DMK Jim Sessions, Newpark Shipbuild
August 15:	Joe O'Toole, Newpark Shipbuild Jim Sessions, Newpark Shipbuild (b) (6)
August 16:	Alf Klaveness, KRC John Faulhaber, ACC Michael Klembus, Hazco David Jensen, Hazco Warren Fraz, ARGO Stephanie Hrabar, GEMS^2 Richard Barnett, HGS Fin Michelsen, OYO Carl Everett, SERS Harold McCune, Armco Nina McAfee, Maxus Charles Bonney, ACC Kay Peterson, Mayor, Day, Caldwell & Keeton
August 17:	Otis Roubieu, Triangle Alex Salas, Alamo Petroleum Quen Forwn, DMU
August 23:	(b) (6) BSCHOOL
August 30:	Jim Thomson, AHA Roger Towe, Tenneco Ted Davis, Alliance Judith Black, USEPA Amy Lange, CH2M Hill

8.3 Emergency Equipment

8.3.1 Flood Gate Test

The flood gate was exercised on August 4, 1995, with no leak detected.

8.3.2 P-8 Auxiliary Pump

P-8 Auxiliary Pump has been converted to the lagoon ground cover vegetation sprinkler source. It has operated approximately 80 hours in August.

8.3.3 Fire Extinguishers

All fire extinguishers were inspected and certified.

8.4 Security

Smith Security provides 24-hour security at the FLTG site, including the south side of Gulf Pump Road; all site areas are checked hourly. No incidents reported by Security in August.

8.5 Operator Training

All training is documented and records are maintained on site. Annual fire extinguisher training was conducted in August.

8.6 Data Management

Data base is fully operational. Data is entered on a daily basis.

8.7 Personnel Monitoring

Results of personnel monitoring conducted during August are included in Table 8-1. A Tenax tube was set in the TOC laboratory during personnel monitoring. These results are included in this table.

8.8 OVM System

Work areas are being monitored daily with Organic Vapor Monitor 580A.

8.9 Repository

Records from the August review are listed in Attachment 8A.

8.10 Meteorological Data

The meteorological station was extensively damaged during an electrical storm and will not be repaired. Temperature and rainfall are measured on conventional gauges at the site.

Rainfall data is listed in Table 8-2.

TABLE 8-1

On-Site Employee Contaminant Limits
(From OSHA 29 CFR 1910 Subpart Z)

Data unavailable this month - see QA/QC Section 7.2.2.1 for explanation

TABLE 8-2

Rainfall Data for August, 1995

Day	Rain Total (Inches)
1	1.60
2	1.40
3	0.00
4	0.00
5	0.00
6	0.00
7	0.10
8	0.00
9	0.00
10	0.00
11	0.01
12	0.00
13	0.00
14	0.10
15	0.00
16	0.00
17	0.00
18	0.00
19	0.00
20	0.00
21	0.01
22	0.80
23	0.10
24	0.01
25	0.00
26	0.00
27	0.00
28	0.00
29	0.00
30	0.00
31	0.00
Total Rainfall	4.13

ATTACHMENT 8A

Repository Status Report: August, 1995

REPOSITORY STATUS REPORT: August, 1995

At the Rice University Library...

1. Remedial Investigation Report April, 1985
2. Remedial Investigation Report Appendices, Volume II, April, 1985
3. Remedial Investigation Report June, 1986 (Updated from April, 1985)
4. Remedial Investigation Report Appendices, Volume I, February, 1986 (Revised June, 86)
5. Remedial Investigation Report Appendices, Volume II, February, 1986 (Revised June, 1986)
6. Remedial Investigation Report Appendices, Volume III, February, I986
7. 1986 Field Investigation and Supplemental Remedial Investigation Report Volume I, December, 1986
8. 1986 Field Investigation and Supplemental Remedial Investigation Report French Limited Site Volume II, Appendices December, 1986
9. 1986 Field Investigation Hydrology Report, December 19, 1986
10. Endangerment Assessment Report February, 1987
11. Endangerment Assessment Report April I987 (Updated from February, 1987)
12. Feasibility Study Report, March 1987
13. In Situ Biodegradation Demonstration Report Volume I Executive Summary, October 30, 1987 Revised 11-11-87
14. In Situ Biodegradation Demonstration Supplemental Report French Limited Site Volume I, November 30, 1987
15. In Situ Biodegradation Demonstration Report Volume II, October 30, 1987 (Revised February 1, 1988 at Site only)
16. In Situ Biodegradation Demonstration Supplemental Report French Limited Site Volume II, November 30, 1987 + Appendices

17. In Situ Biodegradation Demonstration Report Volume III Appendices, October 30, 1987

18. In Situ Biodegradation Demonstration Report Volume III, Appendices, Supplemental Report, November 30, 1987

19. In Situ Biodegradation Demonstration Report French Limited Site, Volume IV October 30, 1987 + Appendices

20. In Situ Biodegradation Demonstration Supplemental Report French Limited Site, Volume IV November 30, 1987 + Appendices

21. In Situ Biodegradation Demonstration Report French Limited Site Volume V, October 30, 1987

22. In Situ Biodegradation Demonstration Report French Limited Site Volume V Appendices, November 30, 1987 - Supplemental Report

23. In Situ Biodegradation Demonstration Report French Limited Site Volume VI Appendices, October 30, 1987

24. In Situ Biodegradation Demonstration Report French Limited Site Volume VII Appendices, October 30, 1987

25. In Situ Biodegradation Demonstration Report French Limited Site Volume VIII Appendices, October 30, 1987

26. In Situ Biodegradation Demonstration Report French Limited Site Volume IX Appendices, October 30, 1987

27. In Situ Biodegradation Demonstration Report French Limited Site Volume X Appendices, October 30, 1987

28. In Situ Biodegradation Demonstration Report French Limited Site Volume XI Appendices, October 30, 1987

29. In Situ Biodegradation Demonstration Report French Limited Site Volume XII Appendices, October 30, 1987

30. In Situ Biodegradation Demonstration Report French Limited Site Volume XIII Appendices, October 30, 1987

31. In Situ Biodegradation Demonstration Report French Limited Site Volume XIV Appendices, October 30, 1987

32. In Situ Biodegradation Demonstration Report French Limited Site Volume XV Appendices, October 30, 1987

33. In Situ Biodegradation Demonstration Report French Limited Site Volume XVI Appendices, October 30, 1987

34. In Situ Biodegradation Demonstration Report French Limited Site Volume XVII Appendices, October 30, 1987

35. In Situ Biodegradation Demonstration Report French Limited Site Volume XVIII Appendices, October 30, 1987

36. Proposed In Situ Biodegradation Demonstration French Limited Site Phase III, April, 1987

37. In Situ Bioremediation Demonstration French Limited April, 1987 Monthly Report, Equipment Evaluation Phase IV

38. In Situ Bioremediation Demonstration French Limited May, 1987 Monthly Report, Equipment Evaluation Phase IV

39. In Situ Bioremediation Demonstration French Limited June, 1987 Monthly Report, Equipment Evaluation Phase IV

40. In Situ Bioremediation Demonstration French Limited July, 1987 Monthly Report, Equipment Evaluation Phase IV

41. In Situ Bioremediation Demonstration French Limited August, 1987 Monthly Report, Equipment Evaluation Phase IV

42. In Situ Bioremediation Demonstration French Limited November, 1987 Monthly Report, Equipment Evaluation Phase IV

43. In Situ Bioremediation Demonstration French Limited December, 1987 Monthly Report, Equipment Evaluation Phase IV

44. In Situ Bioremediation Demonstration French Limited January, 1988 Monthly Report, Equipment Evaluation Phase IV

45. In Situ Bioremediation Demonstration French Limited February, 1988 Monthly Report, Equipment Evaluation Phase IV

46. In Situ Bioremediation Demonstration French Limited March, 1988 Monthly Report, Equipment Evaluation Phase IV

47. In Situ Bioremediation Demonstration French Limited April, 1988 Monthly Report, Equipment Evaluation Phase IV

48. In Situ Biodegradation Demonstration French Limited May/June 1988 Monthly Report, Equipment Evaluation Phase IV

49. In Situ Bioremediation Demonstration French Limited July, 1988 Monthly Report, Equipment Evaluation Phase IV

50. In Situ Bioremediation Demonstration French Limited August, 1988 Monthly Report, Equipment Evaluation Phase IV

51. In Situ Bioremediation Demonstration French Limited September, 1988 Monthly Report, Equipment Evaluation Phase IV

52. Supplemental Biodegradation Equipment Evaluation French Limited Site - Phase IV, September 26, 1988

53. In Situ Biodegradation Demonstration Phase III Quality Assurance Project Plan for French Limited Site, March, 1987

54. Addendum to Quality Assurance Project Plan for the French Limited Site In Situ Biodegradation Demonstration Phase III, February 16, 1990

55. Site Safety and Health Plan French Limited Site - Phase III, April 1987 (Revision 2)

56. Remedial Action Plan Volume I - April, 1990

57. Remedial Action Plan Volume I - September, 1990 (Updated from April, 1990)

58. Remedial Action Plan Volume II Quality Assurance April, 1990

59. Remedial Action Plan Volume II Quality Assurance September, 1990 (Updated from April 1990) Revised June 3, 1991

60. Remedial Action Plan Volume II Quality Assurance June, 1990 Appendix A - Quality Assurance Sampling Procedures and Appendix B - Analytical Methods - B.1 - B.53, September 22, 1989 Revised September 28, 1990

61. Remedial Action Plan Volume III - Health and Safety, July 20, 1990

62. Remedial Action Plan Volume IV - Spill and Volatile Organic Release Contingency Plan (April 6, 1990)

63. Remedial Action Plan Volume V - Shallow Aquifer and Subsoil Remediation Process Design, May, 1990
Page v.i.3 Missing

64. Remedial Action Plan Volume V - Shallow Aquifer and Subsoil Remediation Process Design, July 20, 1990, (Updated from May, 1990)

65. 1988 Equipment Evaluation Phase IV Report French Limited Site: Volume I, February 1,1990

66. 1988 Equipment Evaluation Phase IV Report French Limited Site: Volume II, February 1, 1990

67. 1988 Slough Investigation Report French Limited Site, October 1988

68. Ambient Air Impact Risk Assessment Report, May 5, 1989

69. Workplan for the Shallow Aquifer Pumping Tests for the French Limited Site, July 22, 1988
Page 80 Missing

70. French Limited Site Hurricane Gilbert Preparation Report, October, 1988

71. Potable Water Well Installation Report French Limited Site, December 7, 1988

72. Bioresidue Fixation Alternatives Evaluation Report French Limited Site March 20, 1989

73. Hydrogeologic Characterization Report, March 1989

74. Hydrogeologic Characterization Report - Appendices, March 1989

75. San Jacinto River May 19, 1989 Flood Event Report, June 1989

76. Post San Jacinto River May 1989 Flood Event Soils and Water Analysis Program - Volume I, August 16, 1989

77. Post San Jacinto River 1989 Flood Event Soil and Water Analysis Program Volume II Appendix A

78. Post San Jacinto River 1989 Flood Event Soil and Water Analysis Program Volume III Appendix A, August 16, 1989

79. Riverdale Lake Area Remediation Program August 15, 1989

80. Flood and Migration Control Wall Design Report, August 16, 1989

81. Flood and Migration Control Wall Design Report Appendix C Access Way Design, September, 1989

82. North Pit Remediation Report French Limited Site, November 6, 1989

83. Installation Report for Flood and Migration Control Wall, January 8, 1990

84. Installation Report for Flood and Migration Control Wall
Appendix A - ENSR Site Logs

85. Installation Report for Flood and Migration Control Wall
Appendix B - Inspection Reports

86. Installation Report for Flood and Migration Control Wall Appendix C - Pile Driving Inspection Report January 8, 1990

87. Flood Wall Gate Test Report French Limited Site, February 1990

88. French Limited Remediation Design Report - Executive Summary Bioremediation/Shallow Aquifer, July, 1991

89. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume I of III - Summary Report and Appendices A-H, July 1991

90. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume II of III - Appendices I-M, June 1991

91. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume III of III - Appendices N-P, June 1991

92. Bioremediation Facilities Design Report Volume II of IV Appendices, Reports and Calculations (March 20, 1991)

93. Bioremediation Facilities Design Report Volume III of IV
Appendix E - Design Specifications (March 20, 1991)

94. Bioremediation Facilities Design Report Volume IV of IV - Air Monitoring, March 20, 1991

95. Public Health Assessment for French Limited March 30, 1993 from U.S. Department of Health and Human Services

96. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 1, Report, Appendices A-E

97. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 2, Appendix F

98. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 3, Appendix F continued

99. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 4, Appendix G

100. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 5, Appendix H

101. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 6, Appendix H continued

102. Record of Public Meeting Regarding Remedial Investigation and Feasibility Study (5-21-87)

103. Summary of Remedial Alternative Selection 1988

104. Declaration for the Record of Decision 1988

105. Record of Public Meeting Regarding Remedial Investigation and Feasibility Study (2-11-88) (Updated from June 21, 1987)

106. Consent Decree between the Federal Government and the FLTG

107. French Limited Superfund Site Community Relations Revised Plan August, 1989 - Jacob's Engineering

108. Results of the French Limited Task Group Survey (Goldman and Company) April, 1987

109. Goldman Public Relations Clipping Report

110. BioGEE International, Inc., Project Report Biotreatability Study Using Isolated Indigenous Organisms, April, 1994

111. Field Evaluation of Biodegradation at the French Limited Site (Phase II) Volume I

112. Laboratory Evaluation of Biodegradation at the French Limited Site

113. French Limited Site Focused Feasibility Study (May 1987)

114. Annual Groundwater Monitoring Report, December 1993, Report and Appendices A-B

115. Annual Groundwater Monitoring Report, December 1993, Appendices C-H

116. DNAPL Study Remedial Alternative Selection and Feasibility Study Report, November 1994

117. Cell E and Cell D/F Remediation Verification Report

118. French Limited Wetlands Mitigation, Final Site Restoration Plan

119. French Limited Wetlands Mitigation, Site Selection Report

120. French Limited Wetlands Mitigation, 404 and 401 Permit Application, U.S. Army Corps of Engineers, Galveston, TX

121. Quality Assurance Report, February 15, 1993, Report No. QA93003

122. Quality Assurance Report, January 20, 1994, Report No. QA94001

123. Environmental Protection Agency, Region VI, Hazardous Waste Management Division, First Five Year Review (Type Ia), CERCLIS TXD-980514814, December 1994

124. ARCS, French Limited Site 1993, Annual Groundwater Sampling and Comparison Report, CH2M Hill, January, 1995

125. Annual Groundwater Monitoring Report, December, 1994, Report and Appendices A-G

126. Superfund Preliminary Site Closeout Report CERCLIS TXD-980514814, September, 1994

127. Environmental Protection Agency, Split Sampling and Analysis for Cell D/F, French Limited Site, EPA Contract No: 68-W8-0112, March 1995

128. INT-11 DNAPL Area Cutoff Wall Installation and Permeability Certification Report, AHA, August, 1995

129. Monthly Progress Report, January 1992

130. Monthly Progress Report, January, 1992 Appendices A-C

131. Monthly Progress Report, January, 1992 Appendices E, F

132. Monthly Progress Report, January, 1992 Appendices G

133. Monthly Progress Report, February, 1992

134. Monthly Progress Report, February, 1992 Appendices A-B

135. Monthly Progress Report, February, 1992 Appendices C 1

136. Monthly Progress Report, February, 1992 Appendices C 2

137. Monthly Progress Report, February, 1992 Appendices D-E

138. Monthly Progress Report, March, 1992

139. Monthly Progress Report, March, 1992, Appendix A

140. Monthly Progress Report, April, 1992

141. Monthly Progress Report, April, 1992, Appendices A-B

142. Monthly Progress Report, May, 1992

143. Monthly Progress Report, May, 1992, Appendices A-B

144. Monthly Progress Report, June, 1992

145. Monthly Progress Report, June, 1992, Appendices A-B

146. Monthly Progress Report, July 1992

147. Monthly Progress Report, July 1992, Appendices A-B

148. Monthly Progress Report, July 1992, Appendices B1-B22 Vol. 1 of 3

149. Monthly Progress Report, July 1992, Appendices B1-B22 Vol. 2 of 3

150. Monthly Progress Report, July 1992, Appendices B1-B22 Vol. 3 of 3

151. Monthly Progress Report, August, 1992

152. Monthly Progress Report, August, 1992, Appendices A-B

153. Monthly Progress Report, September, 1992

154. Monthly Progress Report, September, 1992, Appendices A-B

155. Monthly Progress Report, October, 1992

156. Monthly Progress Report, October, 1992, Appendices A-B

157. Monthly Progress Report, November, 1992

158. Monthly Progress Report, November, 1992 Appendices A-B

159. Monthly Progress Report, December, 1992

160. Monthly Progress Report, December, 1992 Appendices A, B

161. Monthly Progress Report, January, 1993

162. Monthly Progress Report, February, 1993

163. Monthly Progress Report, March, 1993

164. Monthly Progress Report, April, 1993

165. Monthly Progress Report, May, 1993

166. Monthly Progress Report, June, 1993

167. Monthly Progress Report, July, 1993

168. Monthly Progress Report, August, 1993

169. Monthly Progress Report, September, 1993

170. Monthly Progress Report, October, 1993

171. Monthly Progress Report, November, 1993

172. Monthly Progress Report, December, 1993

173. Monthly Progress Report, January, 1994

174. Monthly Progress Report, February, 1994

175. Monthly Progress Report, March, 1994

176. Monthly Progress Report, April, 1994

177. Monthly Progress Report, May, 1994

178. Monthly Progress Report, June, 1994

179. Monthly Progress Report, July, 1994

180. Monthly Progress Report, August, 1994

181. Monthly Progress Report, September, 1994

182. Monthly Progress Report, October, 1994

183. Monthly Progress Report, November, 1994

184. Monthly Progress Report, December, 1994

185. Monthly Progress Report, January, 1995

186. Monthly Progress Report, February, 1995

187. Monthly Progress Report, March, 1995

188. Monthly Progress Report, April, 1995

189. Monthly Progress Report, May, 1995

190. Monthly Progress Report, June, 1995

191. Monthly Progress Report, July, 1995

At the Crosby library...

1. Remedial Investigation Report - June, 1986

2. Remedial Investigation Appendices Volume I June, 1986 Revised from Feb. 1986

3. Remedial Investigation Appendices Volume II June, 1986 Revised from Feb. 1986

4. Remedial Investigation Appendices Volume III February, 1986
   Pages 1 and 2 of 10 Res. Engr Tab Missing
   Analytical Report Worksheet 7-8-9-10 Missing
   Pages 1 and 2 of 6 Missing
   Tab 9 H 1-8 Missing, H 11-19 Missing, Page 1 of 10 Missing
   Page 3 Worksheet Missing
   Tab 10 H 1-3 Missing, Page 3-6 of 6 Missing, Page 1-6 Missing
   Tab 12 Page 2-10 of 10 Missing

5. Field Investigation and Supplemental Remedial Investigation Report, Volume I, December, 1986

6. Field Investigation and Supplemental Remedial Investigation Report, Volume II, Appendices, December 1986

7. Field Investigation Hydrology Report, December 19, 1986

8. Feasibility Study Report, March 1987

9. Feasibility Study Report, March 1987

10. French Limited Site Focused Feasibility Study, May 1987

11. Endangerment Assessment Report February 1987

12. Endangerment Assessment Report April 1987

13. Endangerment Assessment Report April 1987

14. In Situ Biodegradation Demonstration Report Volume I Executive Summary October, 1987 (Revised 12-15-87)

15. In Situ Biodegradation Demonstration Report Volume II October 30, 1987

16. In Situ Biodegradation Demonstration Supplemental Report French Limited Site Volume I, November 30, 1987
Missing Supplements to 5-6 and 7 to 10

17. In Situ Biodegradation Demonstration Supplemental Report French Limited Site Volume II, November 30, 1987 + Appendices

18. In Situ Biodegradation Demonstration Supplemental Report French Limited Site Volume III, November 30, 1987 + Appendices

19. In Situ Biodegradation Demonstration Supplemental Report French Limited Site Volume IV, November 30, 1987 -Appendices

20. In Situ Biodegradation Demonstration Supplemental Report French Limited Site Volume V - Appendices, November 30, 1987

21. Results of the French Limited Task Group Survey (Goldman and Company) April 1987

22. Goldman Public Relations Clipping Report

23. Consent Decree between the Federal Government and the FLTG

24. Consent Decree between the Federal Government and the FLTG

25. Laboratory Evaluation of Biodegradation at the French Limited Site, December 1986.

26. Field Evaluation of Biodegradation at the French Limited Site (Phase II) Volume I, March, 1987

27. Bioremediation Facilities Design Report Volume II of IV Appendices, Reports and Calculations March 20, 1991

28. Bioremediation Facilities Design Report Volume III of IV Appendix E - Design Specifications March 20, 1991

29. Bioremediation Facilities Design Report Volume IV of IV Air Monitoring, March 20, 1991

30. Remedial Action Plan Volume I, September 28, 1990

31. Remedial Action Plan Volume II - Quality Assurance, Revised June 3, 1991

32. Remedial Action Plan Volume II - Appendix A - Quality Assurance Sampling Procedures and Appendix B - Analytical Methods - B.1 - B.53, September 28, 1990

33. Remedial Action Plan Volume III - Health and Safety, July 20, 1990

34. Remedial Action Plan Volume V - Shallow Aquifer and Subsoil Remediation Process Design, July 20, 1990

35. Remedial Action Plan Volume V - Shallow Aquifer and Subsoil Remediation Process Design, July 20, 1990

36. Hydrogeologic Characterization Report, March 1989

37. Hydrogeologic Characterization Report Appendices, March 1989

38. Supplemental Biodegradation Equipment Evaluation French Limited Site - Phase IV, September 26, 1988

39. Equipment Evaluation Phase IV Report French Limited Site: Volume I, February 1, 1990

40. Equipment Evaluation Phase IV Report French Limited Site: Volume II, February 1, 1990

41. Site Safety and Health Plan French Limited Site - Phase III, April 1987 (Revision 2)

42. San Jacinto River May 19, 1989 Flood Event Report, June 1989

43. Post San Jacinto River May 1989 Flood Event Soils and Water Analysis Program Volume I, August 16, 1989

44. Post San Jacinto River 1989 Flood Event Soil and Water Analysis Program Volume II, Appendix A

45. Post San Jacinto River 1989 Flood Event Soil and Water Analysis Program Volume III, Appendix A, August 16, 1989

46. Slough Investigation Report French Limited Site, October 1988

47. Flood and Migration Control Wall Design Report, August 16, 1989

48. Flood and Migration Control Wall Design Report (Flood is spelled incorrectly on Volume Cover) + Appendix C - Access way Design September 1989

49. Installation Report for Flood and Migration Control Wall January 8, 1990

50. Installation Report for Flood and Migration Control Wall
Appendix A - ENSR Site Logs

51. Installation Report for Flood and Migration Control Wall
Appendix B - Inspection Reports

52. Installation Report for Flood and Migration Control Wall
Appendix C - Pile Driving Inspection Report January 8, 1990

53. Flood Wall Gate Test Report French Limited Site, February 1990

54. North Pit Remediation Report French Limited Site, November 6, 1989

55. Workplan for the Shallow Aquifer Pumping Tests for the French Limited Site, July 22, 1988
(Additional Title - Pumping Test Program for Shallow Alluvial Aquifer Zone)

56. French Limited Site Hurricane Gilbert Preparation Report October, 1988

57. Riverdale Lake Area Remediation Program, August 15, 1989

58. Addendum to Quality Assurance Project Plan for the French Limited Site In Situ Biodegradation Demonstration Phase III, February 16, 1990

59. Potable Water Well Installation Report French Limited Site, December 7, 1988

60. Bioresidue Fixation Alternatives Evaluation Report French Limited Site March 20, 1989

61. Ambient Air Impact Risk Assessment Report, May 5, 1989

62. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume I of III - Summary Report and Appendices A-H, July 1991

63. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume II of III - Appendices I-M, June 1991

64. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume III of III - Appendices N-P, June 1991

65. French Ltd. Remediation Design Report Executive Summary Bioremediation Shallow Aquifer July 1991

66. BioGEE International, Inc., Project Report Biotreatability Study Using Isolated Indigenous Organisms, April 15, 1994

67. Black EPA Binder

68. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 1, Report, Appendices A-E

69. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 2, Appendix F

70. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 3 Appendix F continued

71. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 4, Appendix G

72. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 5, Appendix H

73. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 6, Appendix H continued

74. Equipment Evaluation Phase IV Report November, 1987 Monthly Report

75. Equipment Evaluation Phase IV Report December, 1987 Monthly Report

76. Microfiche Field Reports 1988 -small box

77. Annual Groundwater Monitoring Report, December 1993, Report and Appendices A-B

78. Annual Groundwater Monitoring Report, December 1993, Appendices C-H

79. DNAPL Study Remedial Alternative Selection and Feasibility Study Report, November 1994

80. Cell E and Cell D/F Remediation Verification Report

81. French Limited Wetlands Mitigation, Final Site Restoration Plan

82. French Limited Wetlands Mitigation, Site Selection Report

83. French Limited Wetlands Mitigation, 404 and 401 Permit Application, U.S. Army Corps of Engineers, Galveston, TX

84. Quality Assurance Report, February 15, 1993, Report No. QA93003

85. Quality Assurance Report, January 20, 1994, Report No. QA94001

86. Environmental Protection Agency, Region VI, Hazardous Waste Management Division, First Five Year Review (Type Ia), CERCLIS TXD-980514814, December 1944

87. ARCS, French Limited Site 1993, Annual Groundwater Sampling and Comparison Report, CH2M Hill, January, 1995

88. Annual Groundwater Monitoring Report, December, 1994, Report and Appendices A-G

89. Superfund Preliminary Site Closeout Report CERCLIS TXD-980514814, September, 1994

90. Environmental Protection Agency, Split Sampling and Analysis for Cell D/F, French Limited Site, EPA Contract No: 68-W8-0112, March 1995

91. INT-11 DNAPL Area Cutoff Wall Installation and Permeability Certification Report, AHA, August, 1995

92. Health Consultation, French Ltd., Harris County, TX, CERCLIS No. TXD-980514814, TDH, September 6, 1994

93. Monthly Progress Report, January, 1992

94. Monthly Progress Report, January, I992, Appendices A-C

95. Monthly Progress Report, January, 1992, Appendices E-F

96. Monthly Progress Report, January, 1992, Appendix G

97. Monthly Progress Report, February, 1992

98. Monthly Progress Report, February, 1992, Appendices A-B

99. Monthly Progress Report, February, 1992, Appendices C 1

100. Monthly Progress Report, February, 1992 Appendices C 2

101. Monthly Progress Report, February, 1992 , Appendices D-E

102. Monthly Progress Report, March, 1992

103. Monthly Progress Report, March, 1992, Appendix A

104. Monthly Progress Report, April, 1992

105. Monthly Progress Report, April, 1992, Appendices A-B

106. Monthly Progress Report, May, 1992

107. Monthly Progress Report, May, 1992, Appendices A-B

108. Monthly Progress Report, June, 1992

109. Monthly Progress Report, June, 1992, Appendices A-B

110. Monthly Progress Report, July, 1992

111. Monthly Progress Report, July, 1992, Appendices A-B

112. Monthly Progress Report, July, 1992, Appendices B1-B22 Vol. 1 of 3

113. Monthly Progress Report, July, 1992, Appendices B1-B22 Vol. 2 of 3

114. Monthly Progress Report, July, 1992, Appendices B1-B22 Vol. 3 of 3

115. Monthly Progress Report, August, 1992

116. Monthly Progress Report, August, 1992, Appendices A-B

117. Monthly Progress Report, September, 1992

118. Monthly Progress Report, September, 1992, Appendices A-B

119. Monthly Progress Report, October, 1992

120. Monthly Progress Report, October, 1992, Appendices A-B

121. Monthly Progress Report, November, 1992

122. Monthly Progress Report, November, 1992, Appendices A-B

123. Monthly Progress Report, December, 1992

124. Monthly Progress Report, December, 1992, Appendices A-B

125. Monthly Progress Report, January, 1993

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151. Monthly Progress Report, March, 1995

152. Monthly Progress Report, April, 1995

153. Monthly Progress Report, May, 1995

154. Monthly Progress Report, June, 1995

155. Monthly Progress Report, July, 1995

12 Large Brown Folders:

1. Administrative Record Index - 2 folders
   Administrative Record 09-26-79 thru 05-29-83
   Administrative Record 06-03-83 thru 11-28-83
   Administrative Record 02-28-84
   Administrative Record 03-09-84
   Technical Comments on Remediation Investigation Report 2-84
   Supplemental Investigation - Resource Engr. 1-84
   Administrative Record 3-9-84

2. Administrative Record 08-31-84
   Administrative Record 10-29-84 thru 01-22-85
   French Ltd. Technical and Regulatory Concepts for In-Place Closure, 09-84
   Supplementary Investigation, May 1984
   French Ltd. Field Activities Work Plan, February 1985
   Supplementary Investigation Attachments, May 1985

3. Administrative Record 02-04-85

Remedial Investigation, Vol. I Report, April 1985
Remedial Investigation, Vol. II Appendices, April 1985

4. Administrative Record 04-08-85 thru 11-26-85
Administrative Record 02-14-86 thru 04-04-86
Technical Report for Resource Engineering, 12-03-85
Appendix QA Program for French Ltd., 12-18-85
1985 Field Investigation Report Appendices, January, 1986
1985 Field Investigation Report , January, 1986

5. Administrative Record 04-01-86
Remedial Investigation Report Appendices, Vol. II, April, 1986

6. Administrative Record 4-1-86

7. Administrative Record 05-08-86 thru 05-12-86
Administrative Record 06-01-86
Administrative Record 01-05-87
Remedial Investigation Report, June 1986
Laboratory Evaluation of Biodegradation, 12-86
1986 Field Investigation Hydrology Report, 12-86
Endangerment Assessment Report, 2-87

8. Feasibility Study, March 1987

9. Administrative Report 03-11-87 thru 03-25-87
Administrative Report 4-1-87
Administrative Report 4-7-87
In Situ Biodegradation Demonstration Phase III QA Project Plan 3-87
Endangerment Assessment Report, 4-87
Proposed In Situ Biodegradation Demonstration French Limited Site Phase III 4-87

10. Administrative Report 4-15-87 thru 5-I-87
Administrative Report 5-21-87 thru 7-2-87
French Limited Focused Feasibility Study, ERT 5-87
Revised Field Evaluation of Biodegradation at French Site Phase II Vol. I
-Revised 7-10-87

11. Administrative Report 7-20-87 - 11-23-87
Administrative Report Undated Documents 000122-000134
In Situ Biodegradation Demonstration Report Vol. I Executive Summary 10-87
French Limited Site Work Plan Vol. I Project Activities and Sample Plan

12. Texas Air Control Board Regulations I thru IX
Standard Exemption List

Application for Permit

During the month of **August**, the status of both libraries have been reviewed and the above information found to be accurate.

9.0 WETLANDS RESTORATION

9.1 Summary of Activities and Progress

Conducted safety meetings at the start of each work shift; inspected all equipment for safety compliance each shift; used daily lottery ticket safety awareness program.

Updated site work plan based on field progress.

Completed re-vegetation of the tidally-impacted zone; plants were harvested from the San Jacinto State Park and from the Brownwood site, and then replanted on the site.

Demobilized the contractors.

Designed a permanent site access gate.

Conducted four site tours for interested parties.

Continued work on a video of the project.

Developing the 5-year site maintenance plan.

Reviewed the project status, progress, and issues with the agency review committee; the agencies are satisfied with site progress.

9.2 Problem Areas and Solutions

Problem	Solution
Safety awareness	Daily safety meeting; lottery ticket program; frequent equipment inspections.

9.3 Problems Resolved

None.

9.4 Deliverables Submitted

August, 1995, Monthly Report.
Project update to agency review committee.

9.5 Upcoming Events and Activities

Daily safety program when work on site.

Support Baytown response plan for the remaining affected soil.

Develop forecast of maintenance requirements.